Heat Treatment and Mechanical Properties of Components Made of Magnesium Alloys

necessitate additional artificial ageing of the component. There are 2 figures, 2 tables.

Card 2/2

MEDVEDYUK, Nikolay Ivanovich; NARYSHKIN, A.A., nauchn. red.; MAKSIMOVA, Yu.M., red.

[Metal fitting and sheet-metal work] Slesarno-zhestianitskie raboty. Izd.5., perer. i dop. Moskva, Vysshaia shkola, 1965. 374 p. (MIRA 18:8)

S/187/62/000/007/002/003
D053/D113

AUTHOR: Karyshkin, A.K.

TITLE: Calculation of the input stage of a TV preamplifier with a germanium junction transistor

PERIODICAL: Tekhnika kino i televideniya, no. 7, 1962, 40-45

TEXT: The study was conducted to develop a method for calculating the input stage circuit of a transistor amplifier for TV camera tubes, using a germanium junction transistor. The author analyzes an equivalent input stage circuit and derives formulas for calculating the optimum signal-to-noise ratio, noise current, optimum emitter current, and optimum temperature compensation coefficient. An input stage circuit using a П 411 (P411) transistor and designed according to the obtained theoretical results is shown in Fig. 4. An experimental check-up of this circuit gave a signal-to-noise ratio $\psi_{exp} = 18.5$, the obtained theoretical value ψ_{cal} being equal to 19.2. The obtained ratio indicates that existing transistors can secure a signal-to-noise ratio which is entirely suitable for practical application. There are 4 figures. The most

Card 1/1 →

S/187/62/000/007/002/003
D053/D113

Calculation of the input stage .....

important English-language reference is: P.B. Helsdon, Transistors in Video Equipment, J. Brit. of the IRE, 1959, No. 12.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Engineering Institute)

Card 2/3

NARYSHKIN, A.K.; BASHARINOV, A.Ye., prof., red.

[Conversion of radar data into a digital form; summary of lectures] Preobrazovanie radiolokatsionnoi informatsii v tsifrovuiu formu; konspekt lektsii. Moskva, Energ.in-t 1964. 30 p. (MIRA 17:12)

L 1463-66 EWT(l)/EWA(h)

ACCESSION NR: AP5021471 UR/0020/65/163/006/1309/1312

AUTHOR: [illegible] (Graduate engineer) (Moscow); [illegible] (Graduate engineer) [illegible]

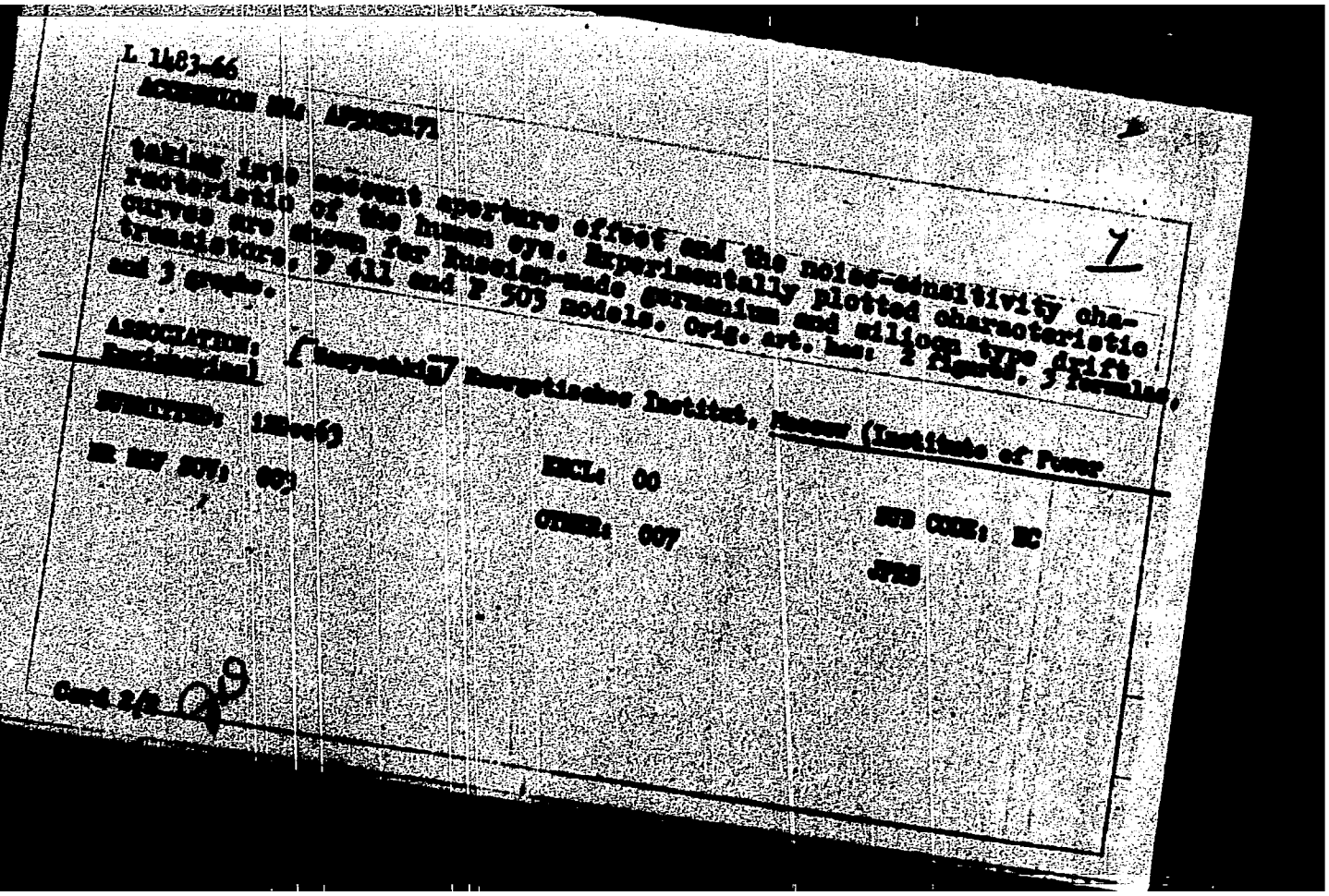
TITLE: Sensitivity of transistorized image-current amplifiers

SOURCE: Doklady Akademii nauk SSSR, v. 163, no. 6, 1965, 1309-1312

TOPIC TAGS: electronic circuit, TV equipment, transistor, signal to noise ratio, current amplifier, transistorized amplifier

ABSTRACT: The article analyzes the input-cascade circuit of an image-current amplifier for television cameras. Such a circuit consisting of an emitter stage followed by a base stage has resulted in the highest signal/noise ratio. The π-equivalent circuit of this transistor stage is used for determining the noise current and transfer coefficient. The maximum signal/noise ratio, the optimum emitter current and the optimum value of corrective [illegible] connected to the base are all calculated next.

Card 1/2



L 1483-66

ACCESSION NR: AP5021471

Cards 2/2 Q9

DUBININ, V.M., inzh.; KOZLOVYAKIN, N.A., inzh.; KUMEKHOV, B.[illegible], inzh.; NARYSHKIN, A.P., inzh.; TARASOV, M.V., inzh.; YASAF[illegible].F., inzh.

Tyrnyauz ore dressing plant. Gor. zhur. no.9:10-[illegible].

RUSAKOV, N.G., kand.tekhn.nauk; NARYSHKIN, G.A., inzh.

Determining the parameters of chamber mining without supports for the flat coal seams of Donets Basin. Ugol' Ukr. 6 no.6:19-20 Je '62. (MIRA 15:7)

1. Institut gornogo dela AN USSR.
(Donets Basin—Coal mines and mining)

NIKOLIN, V.I.; NAKYSHKIN, G.A.

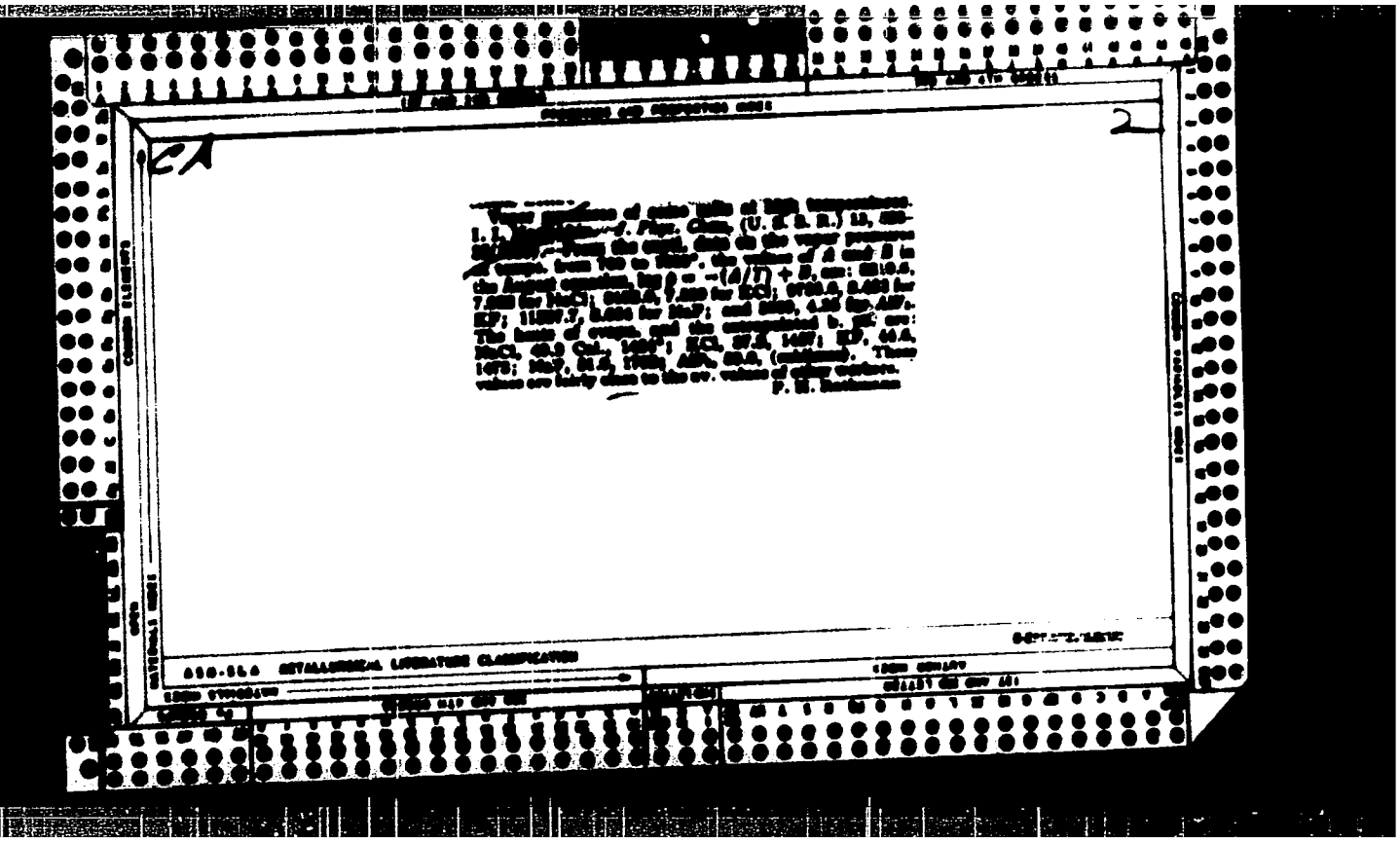
Determination of the tensile strength of rock by the method of splitting the core sample. Vop.gor.da l. no.22:65-67 '64. (MIRA 18:6)

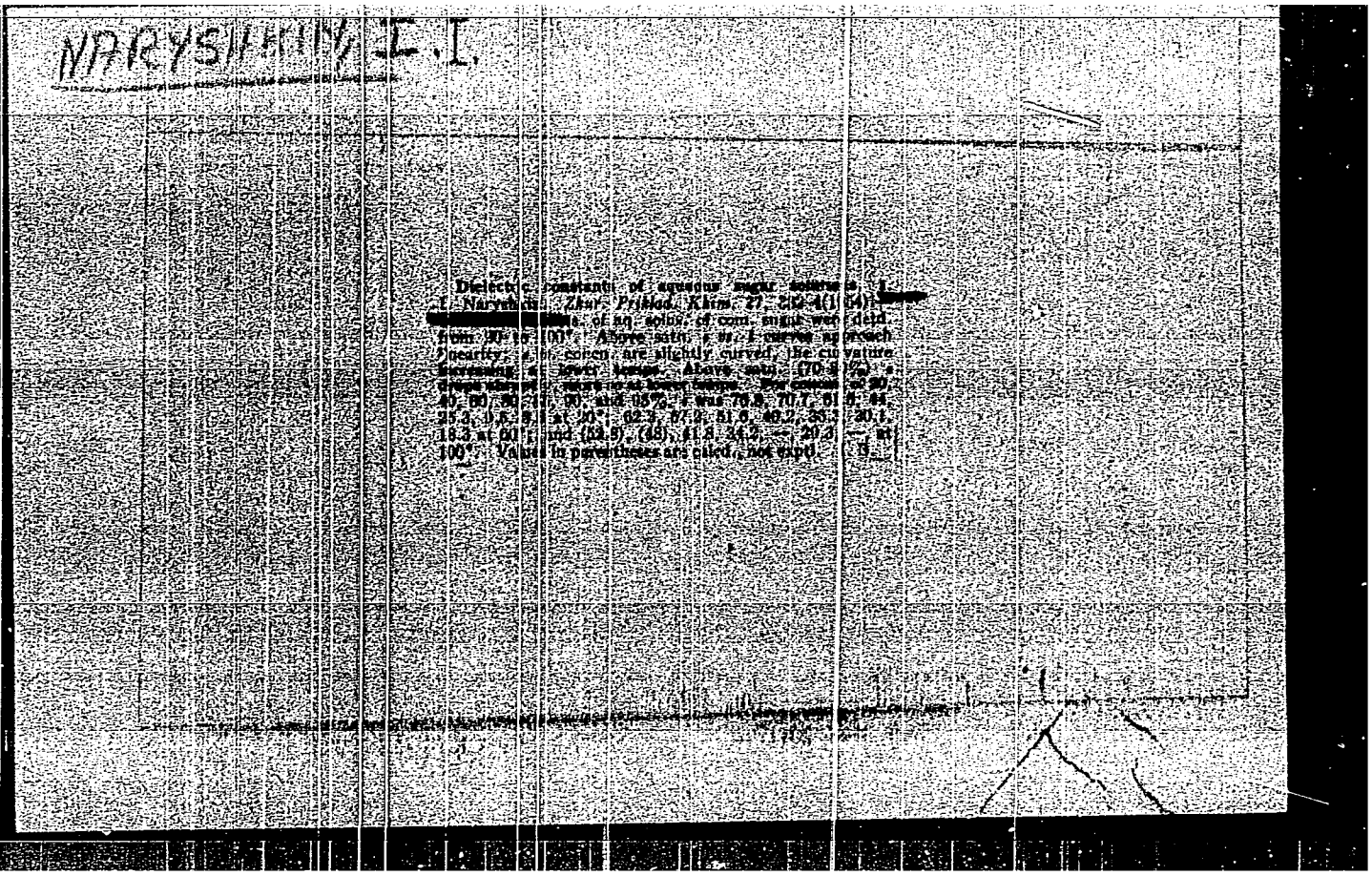
1. NARYSHKIN, I. I.

2. USSR (600)

"Determining the Vapor Tension of AlCl3 and its Fusions iwth Na Cl at High Temperatures," Zhur. Fiz. Khim., 13, No. 5, 1939. Leningrad, Industrial Institute. Received 29 Aug 1938.

9. [redacted] Report U-1613, 3 Jan 1952.





NARYSHKIN, I. I.

AID P - 3268

Subject	:	USSR/Electricity
Card 1/1		Pub. 27 - 23/25
Authors	:	Naryshkin, I. I., M. A. Shatelen, L. R. Neyman, A. M. Zalesskiy, B. I. Domanskiy, S. V. Usov, V. T. Renne, I. A. Zaytsev, and others
Title	:	Professor M. D. Kamenskiy. His 70th birthday and 45 years of scientific and educational activity
Periodical	:	Elektrichestvo, 9, 84-85, S 1955
Abstract	:	The authors pay tribute to Prof. M. D. Kamenskiy's scientific and educational activity and present a short biographical sketch and description of his activities.
Institution	:	None
Submitted	:	No date

137-58-6-11534

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 41 (USSR)

AUTHOR. Naryshkin, I.I.

TITLE: Electrocapillary Phenomena in Systems Consisting of a Metal and a Salt Melt (Elektrokapillyarnyye yavleniya v sistemakh metall-rasplav soli)

PERIODICAL: Tr. Leningr. politekhn. in-ta, 1957, Nr 188, pp 106-109

ABSTRACT: The method of maximum pressure with an inverted capillary is used to study electro-capillary phenomena in Sn and Cd within a eutectic KCl-LiCl melt. The experiments were performed at 490-500°C. In determining the potential of the electrode under investigation, ohmic losses are not taken into consideration because of the smallness of the polarizing currents. The standard electrodes were of the same composition as those under investigation. Both the cathodic and anodic branches of the curves were obtained for either metal. The maximum value of the surface tension of Sn was at a potential of -0.55 v, while for Cd it was -0.65 v Thus, another method has been found to obtain electrocapillary curves for Sn and Cd, hitherto determined with the aid of the capillary electrometer only. Yu.N.

Card 1/1

1. Tin--Electrical properties 2. Cadmium--Electrical properties 3. Halogen chlorides--Applications 3. Electrodes--Performance

CHUGAYEV, Roman Romanovich, prof., doktor tekhn.nauk; MARYUSHKIN, I.I., otv.red.

[Hydraulics; lecture course] Gidravlika, kurs lektsii. Leningrad, Leningr.politekhn.in-t. Pt.2. 1960. 179 p.
(MIRA 14:2)

(Hydraulics)

NARYSHKIN, I.I.; BAZHENOV, A.Ye.

Polarography of melts with lithium and potassium chloride as the support using a stationary electrode. Zhur.prikl.khim. 34 no.9:2102-2104 S '61. (MIRA 14:9)
(Polarography)

NARYSHKIN, I.I.; MOGILEV, V.M.

Polarography of melts with potassium and sodium chlorides as the support using a stationary electrode. Zhur.prikl.khim. 34 no.9:2104-2106 S '61. (MIRA 14:9)
(Polarography)

NARYSHKIN, I.I.; MININ, N.A.

Polarography of melts over lithium and potassium chlorides using a lead dropping electrode. Zhur.prikl.khim. 34 no.10:2353-2356 O '61. (MIRA 14:11)

(Salts) (Polarography) (Electrodes, Lead)

NARYSHKIN, I.I.; ZAYCHENKO, V.N.

Polarographic determination of the diffusion coefficients of zinc, manganese, and cadmium ions in fused lithium and potassium chlorides. Zhur.prikl.khim. 37 no.1:214-215 Ja '64. (MIRA 17:2)

NARYSHKIN, I.I.; GAVRILOV, L.A.

Polarography of melts using a bismuth dropping electrode.
Zhur.prikl. khim. 37 no. 5:1130-1132 My '64. (MIRA 17:7)

MARYSHKIN, I. S.

Arithmetic - Problems, Exercises, Etc.

"Great construction projects of Communism" as a topic of arithmetical problems. Mat. v shkole No. 3, 1952

9. **Monthly List of Russian Accessions**, Library of Congress, November 1953. Unclassified.

MARYSHKIN, I.S. (stantsiya Kalinino Chuvashskoy ASSR).

Problems on arithmetic in rural schools. Mat.v shkole no.1:62-65 Ja-F '57. (MLRA 10:2)
(Arithmetic--Problems, exercises, etc.)

SVET, D.Ya.; MARYSHKIN, S.P.; GRISHIN, V.V.

Modulation reflectometer for molten metals and other substances. Trudy inst.Kom.stand., mer i izm. prib. no.42:59-68 '59. (MIRA 14:1)

(Reflectometer)

L 22601-66 WW
ACC NR: AP6014226 SOURCE CODE: UR/0115/66/000/003/0042/0044

AUTHOR: Svet, D. Ya.; Naryshkin, S. P.; Khmelevskaya, Ye. A.

18
B

ORG: none

TITLE: Using relative spectroreflectrometry to measure true temperatures 9M

SOURCE: Izmeritel'naya tekhnika, no. 3, 1966, 42-44

TOPIC TAGS: temperature measurement, reflectometer

ABSTRACT: A method is proposed for using relative modulation reflectometry for measuring true temperature and simultaneously determining the radiating (reflecting) power of the emitting surface. The spectral radiance of the surface is determined from the coefficient of reflection for spectral sections in which the corresponding brightness or color temperatures for the surface are simultaneously measured. A specially designed reflectometric installation was used for application of this method to determining the true temperatures and coefficients of spectral radiating power for pure metal in the molten and solid state. Diagrams of the experimental setup are given and the method used for calibrating the instrument is discussed.

Card 1/2

UDC: 535.853:536.5

L 29601-66
ACC NR: AP6014226

Use of relative modulation reflectometry for measuring the true melting points of pure iron, nickel, cobalt and palladium gave results with an error of less than ±1%. The specially developed installation was used for measuring the true temperatures of these same metals as well as those of molybdenum and tungsten in the solid state. The method may theoretically be used for determining the true temperature of a surface with a radiating power which changes arbitrarily during measurement. A natural source of error in the use of this method is the difference in the coefficients of reflection with a change in the direction of the incident and reflected rays. This effect may be eliminated by reversing the optical system, i.e. interchanging the outside light source and the receiver by rotating the entire reflectometer system in the horizontal plane through 180°, or by using angles of incidence and reflection close to zero, which is also practically feasible. Orig. art. has: 2 figures, 11 formulas.

SUB CODE: 20/ SUBM DATE: 00/ RIG REF: 005/ OTH REF: 003

Card 2/2

ACC NR: AT7004204 (A) SOURCE CODE: UR/0000/66/000/000/0003/0009

AUTHORS: Svet, D. Ya.; Afon'kin, V. G.; Grishin, V. V.; Naryshkin, S. P.; Yeshova, T. N.; Parfinovich, A. F.

ORG: none

TITLE: Photoelectronic pyrometry of metals in the near infrared, visible, and ultraviolet spectral regions

SOURCE: AN SSSR. Institut metallurgii. Eksperimental'naya tekhnika i methody vysokotemperaturnykh izmereniy (Experimental techniques and methods of high temperature measurement). Moscow, Izd-vo Nauka, 1966, 3-9

TOPIC TAGS: ir pyrometer, optic pyrometer, radiation pyrometer, photoelectric pyrometer, pyrometry / PIRED-5 pyrometer

ABSTRACT: A discussion of using radiation pyrometry in determining the temperature of molten metals is presented. The discussion, an extension of the work of D. Ya. Svet (Dokl. AN SSSR, 1961, 140, No. 4), is concerned mainly with estimating the difference between the luminous and true temperature of molten metals in the near infrared, visible, and ultraviolet spectral regions. Experimental results for molten iron, nickel, and cobalt respectively are tabulated. It is concluded that, to insure accurate automatic temperature recording of molten metals by radiation pyrometry, is is essential to know

Card 1/2

ACC NR: AT7004204

the emission characteristics of the metals investigated. A short discussion of type PIRED-5 pyrometer is presented. Orig. art. has: 2 tables, 1 graph, and 2 equations.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 006

Card 2/2

MARYSHKIN, V.A.

ZAPOL'SKIY, G.N.; SHESTERIKOVA, L.I.; MARYSHKIN, V.A.; LEBEDEVA, Yu.A., red.; KARYAKINA, M.S., tekhn. red.

[Means and methods of civil air defense; an album of visual aids for units of the Volunteer Society for Assistance to Army, Air Force, and Navy studying civil air defense] Sredstva i sposoby protivovozdushnoi oborony naseleniia; al'bom naglidnykh posobii dlia kruzhkov DOSAAF, izuchaiushchikh protivovozdushnuiu oboronu. Red. IU.A. Lebedeva. Khudozh. M.P. Tumanov. Moskva, Izd-vo DOSAAF, 1958. 39 p. (MIRA 11:7)

(Air defenses)

0768
11/61/004/003/020/020
2/E382

3,2320 (1049,1502,)

AUTHORS: Barsukov K.A. and Naryshkina L.G.

TITLE: Transient radiation in moving media

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy Radiofizika, v. 4 no. 3 1961 574 - 77

TEXT: Transient radiation occurs when a charged particle crosses the boundary of a fast moving object. In order to elucidate the main characteristics of this effect a simple case when the velocity of the particle is parallel to the velocity of a medium is considered. This problem was partially studied in Ref. 2 (the present author and B.M. Bolotovskiy - this journal 3, 336 (1960)). It is assumed that a particle carrying a charge q moves with a velocity v in the positive direction of the axis z. The coordinate system adopted is x, y, z, ict such that $z = ut(u, 0)$ is the boundary plane between two media having constant ε_1 and ε_2. The frequency-transformation formula gives

Card 1/5

30768
S/141/61/004/003/020/020
E192/E382

Transient radiation in moving media

$$\frac{d\omega}{d\omega'} = \frac{1 - u/v_g}{(1 - u^2/c^2)^{1/2}} \qquad (1)$$

where v_g is the z-component of the group velocity in the stationary medium. If the moving medium is a plasma such that $\epsilon_1 = 1$ and $\epsilon_2 = 1 - \omega_p^2/\omega^2$ where ω_p is the plasma frequency, the transient radiation field in the coordinate system of the boundary can be described by vector and scalar potentials A' and φ'; the expressions for these can be obtained from Ref. 3 (V.L. Ginzburg, I.M. Frank, ZhETF, 16, 15, 1946). All the symbols with dashes in the above refer to the coordinates tied to the boundary of the system. It is shown that the radial component of the wave vector is in the form

Card 2/5

Transient radiation in moving media

$$\lambda = \frac{1}{c}\sqrt{\omega^2 - \omega_0'^2}\ \sin\vartheta \qquad (5)$$

where ϑ is the angle between the axis z and the radius vector. The components of the vector potential for the intervals $\pi - \arccos(u/c) < \vartheta < \pi$ is given by:

$$A_2 = \frac{q\,l\cos\theta}{\pi c^2 R}\int_{\omega_0}^{\omega_0'\cos\theta/(\cos^2\theta - u^2/c^2)^{1/2}} a_2\left(\frac{1}{c}\sqrt{\omega^2 - \omega_0'^2\sin^2\theta},\ \omega'(\omega)\right)\times \qquad (6)$$

$$\times \exp\left[i\left(-\frac{1}{c}\sqrt{\omega^2 - \omega_0'^2}\,R + \omega t\right)\right]\left|\frac{d\omega'}{d\omega}\right| d\omega + \text{K.C.}$$

while in the interval $\pi - \arccos(u/c) > \vartheta > 0$, it is expressed by:

Card 3/5

Transient radiation ....

$$A_y = \frac{ql\cos\theta}{\pi c^3 R}\int_{\omega_0}^{\infty} a_2\left(\frac{1}{c}\sqrt{\omega^2-\omega_0^2}\cos\theta,\ \omega'(\omega)\right)\times$$

$$\times \exp\left[i\left(-\frac{1}{c}\sqrt{\omega^2-\omega_0^2}R+\omega t\right)\right]\left|\frac{d\omega'}{d\omega}\right| d\omega + \text{к. с.}, \qquad (7)$$

where $R = (r^2 + z^2)^{1/2}$. Eqs. (6) and (7) can be used to determine the energy of the transient radiation. Thus, it is found that the radiation energy directed towards the medium is given by:

$$I_u^+ = \sqrt{\frac{1-u_1c}{1+u_1c}}\ I_0^+(\omega') \qquad (8)$$

and that directed towards the vacuum is expressed by:

Card 4/5

Transient radiation . . .

$$I_u^- = \sqrt{\frac{1 + u/c}{1 - u/c}}\, I_o(\omega) \qquad (9)$$

where I_o^+ and I_o denote the full [illegible]ation energy as having a suitable direction in the stati[illegible]edium. The final expression for the energy radiated [illegible]dium is in the form:

$$I_u^- = \frac{q^2\omega_o^2}{15\pi} \sqrt{\frac{1 + u/c}{1 - u/c}} \left[\ln \frac{\qquad}{(1 \quad v/c)} \cdot 1 \right] \qquad (11) .$$

There are 1 figure and 4 Soviet [illegible]erences.

ASSOCIATION: Fizicheskiy institut [illegible] P.N. Lebedeva AN SSSR (Physics Institute [illegible] N Lebedev of the AS USSR)

SUBMITTED: July 14 1960

Card 5/5

S/056/62/043/003/032/063
B108/B102

AUTHOR: Naryshkina, L. G.

TITLE: Energy losses owing to emission of longitudinal waves by a charged particle moving through a medium

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 3(9), 1962, 953 - 957

TEXT: The energy losses due to emission of longitudinal waves by a charged particle moving in a medium with spatial dispersion are studied. The calculations are made in analogy to a work by V. L. Ginzburg and V. D. Zydman (ZhETF, 36, 1824, 1959). The scalar potential of the emission field is expanded into plane waves whereby the longitudinal losses are stated in the form

$$\frac{dW}{dt} = 8\pi^3 e^2 \mathrm{Re} \sum_m \int g(r - R)\, g(k, \omega_m)\, e^{ikr + i\omega t}(kv) \frac{dk\, dr}{k^2 |\varepsilon'_m|}, \quad (6).$$

$\varepsilon'_m = \partial \varepsilon^l / \partial \omega$ at the point $\omega = \omega_m(k)$; $\omega_m(k)$ is the m-th branch of the function determined by the equation $\varepsilon^l(\omega_m(k), k) = 0$; $\vec{R}$ is the radius

Card 1/2

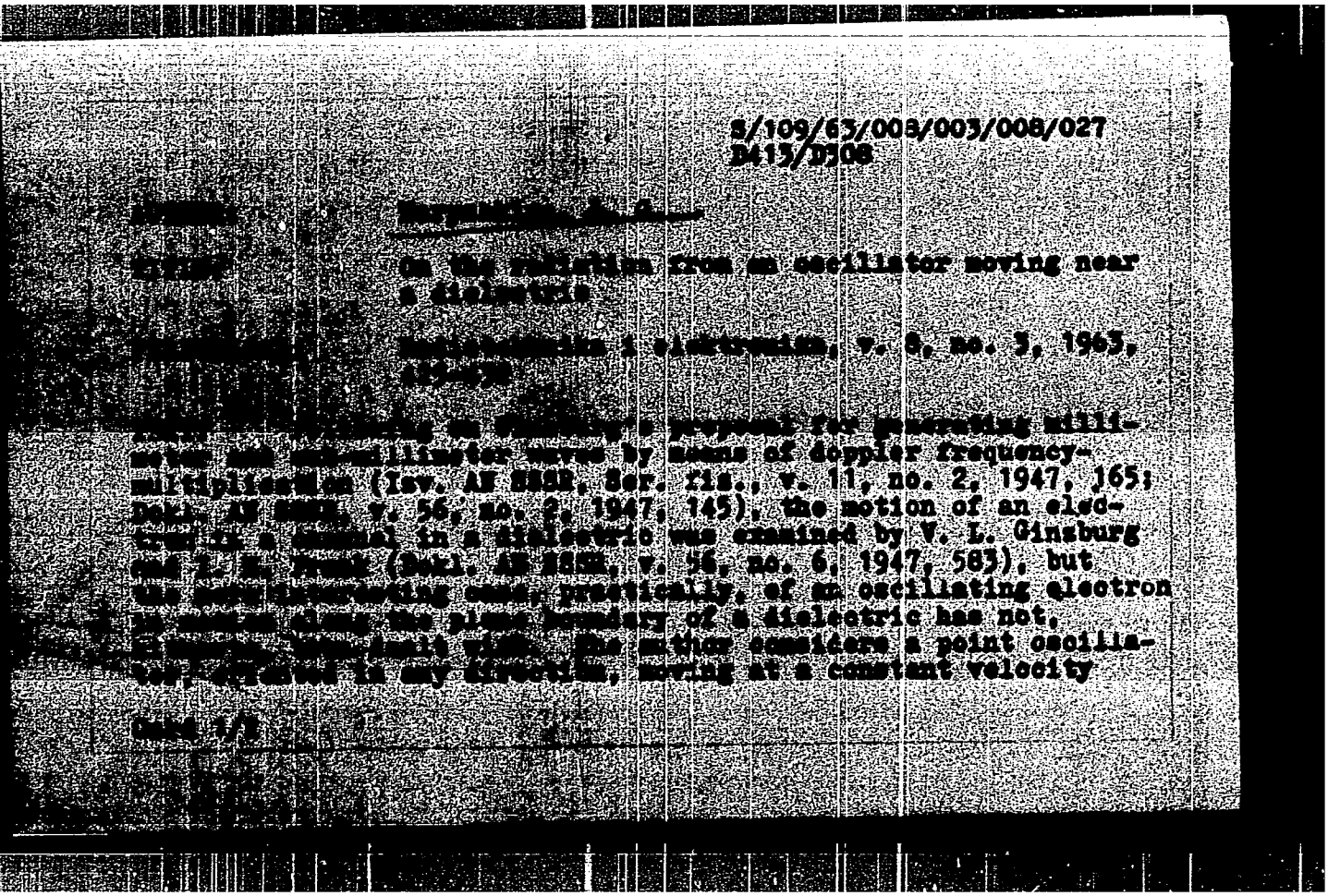
Energy losses owing to emission...

vector of the center of mass of the charge; $\int g(\vec{r} - \vec{R})d\vec{r} = 1$; $g(\vec{k},\omega) = (2\pi)^{-4}\int g(\vec{r} - \vec{R}) \exp(-i\vec{k}\vec{r} - i\omega t)\, d\vec{r}dt$. The above result is evaluated for two specific cases. When a charged particle displays natural vibrations these may be amplified by interaction between charge and medium. This is significant in plasma physics, as a pinch may attain an additional instability when its natural oscillations are amplified. The major part of longitudinal losses is caused by polarization losses.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut (Moscow Engineering Physics Institute)

SUBMITTED: March 20, 1962

Card 2/2



S/109/63/008/003/008/027
D413/D308

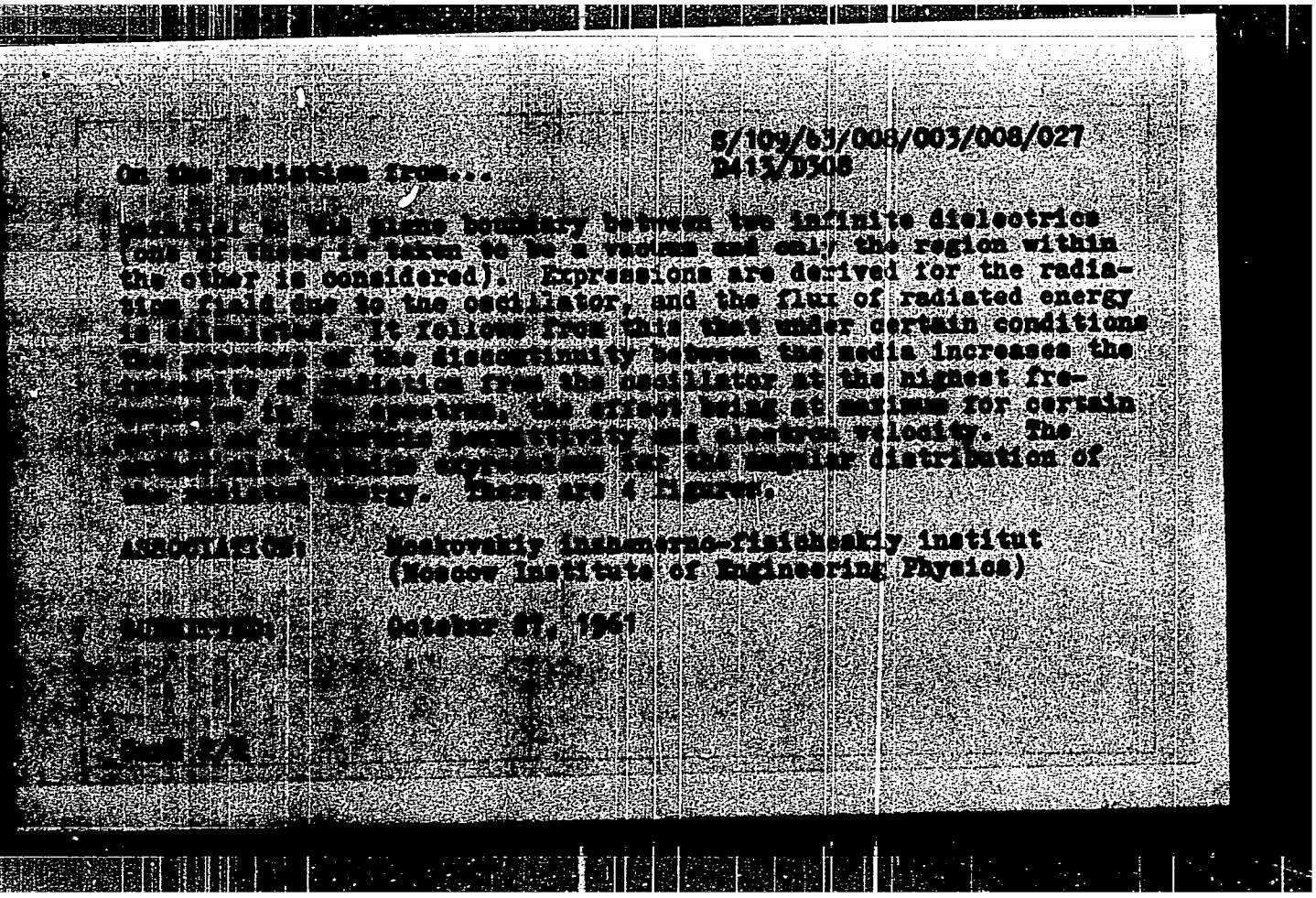
[illegible]

[illegible] on the radiation from an oscillator moving near a dielectric

[illegible] Radiotekhnika i elektronika, v. 8, no. 3, 1963, 433-[illegible]

[illegible] In a previous paper by the author (Izv. AN SSSR, Ser. fiz., v. 11, no. 2, 1947, 165; Dokl. AN SSSR, v. 56, no. 2, 1947, 145), the motion of an electron [illegible] in a dielectric was examined by V. L. Ginsburg (Izv. AN SSSR, Ser. fiz., v. 11, no. 2, 1947, 165; Dokl. AN SSSR, v. 56, no. 2, 1947, 145). The present paper considers, practically, of an oscillating electron [illegible] the plane boundary of a dielectric has not, [illegible] The author considers a point oscillator [illegible] moving at a constant velocity

Card 1/1



S/109/63/008/003/008/027
D413/D308

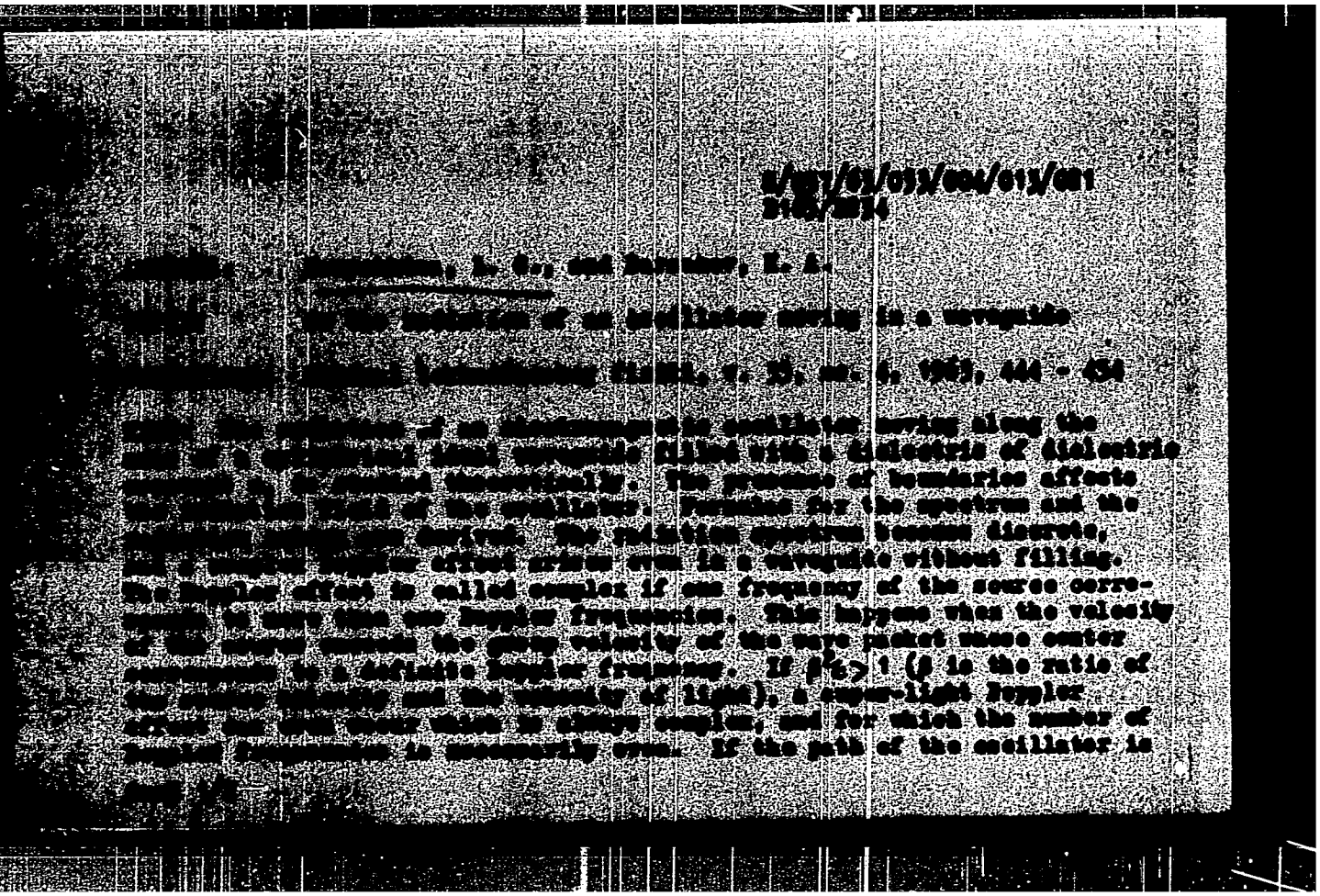
On the radiation from...

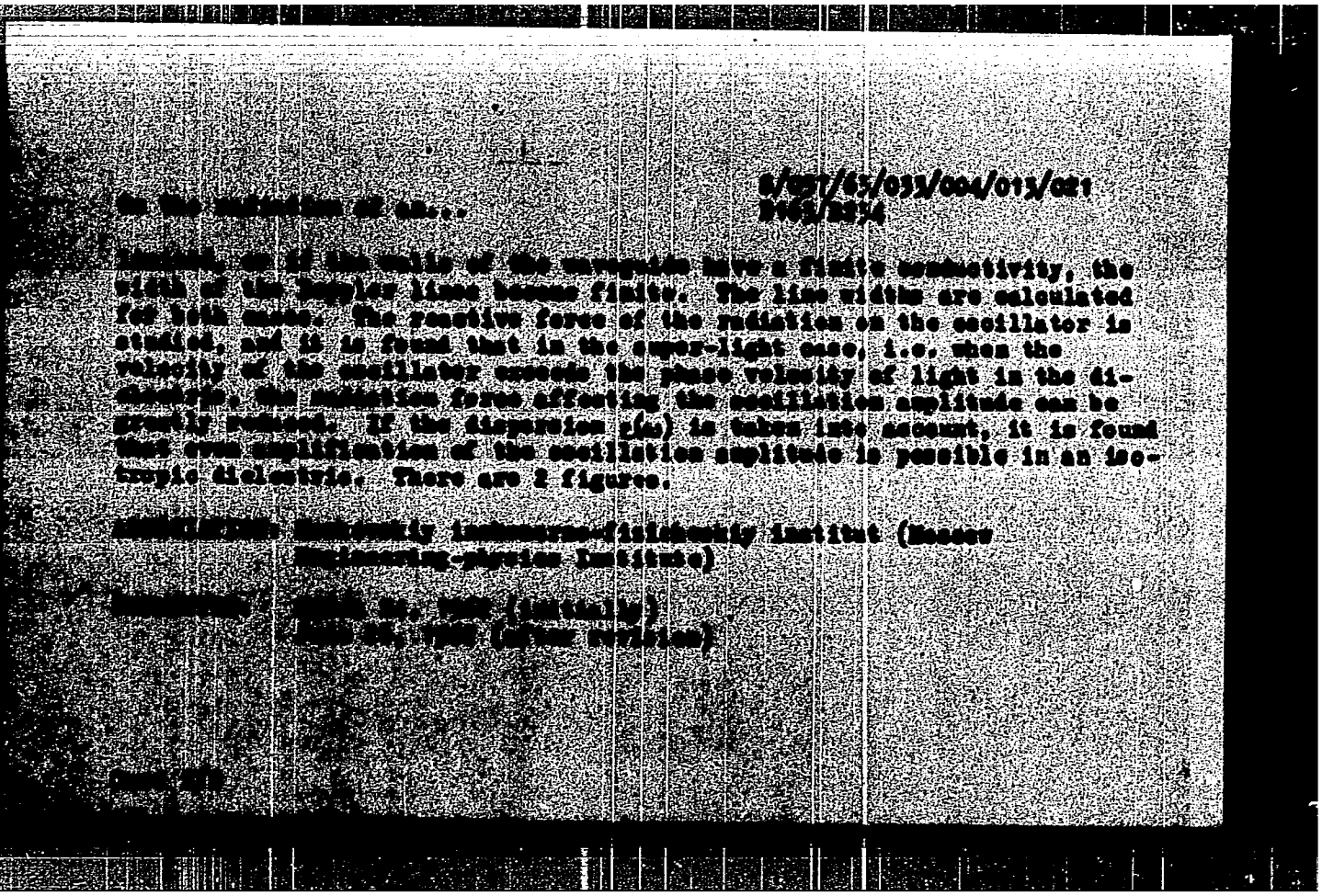
...boundary between two infinite dielectrics ...is taken to be a vacuum and only the region within ...other is considered). Expressions are derived for the radiation field due to the oscillator, and the flux of radiated energy is determined. It follows from this that under certain conditions ...discontinuity between the media increases the ...radiation from the oscillator at the highest frequencies in the spectrum, the effect being of maximum for certain ...velocity. The ...angular distribution of the radiated energy. There are 4 figures.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut (Moscow Institute of Engineering Physics)

SUBMITTED: October 27, 1961

Card 2/2

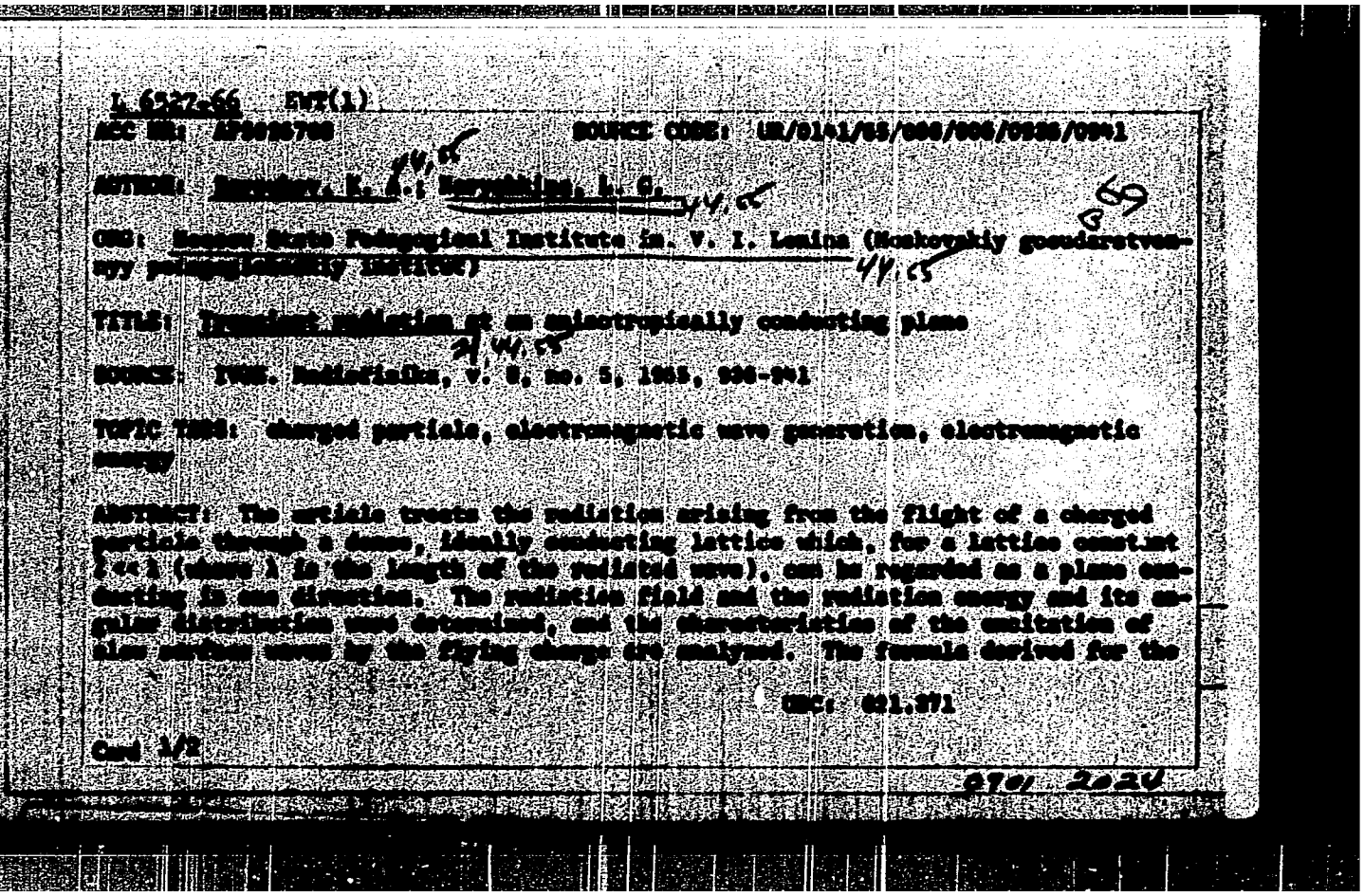




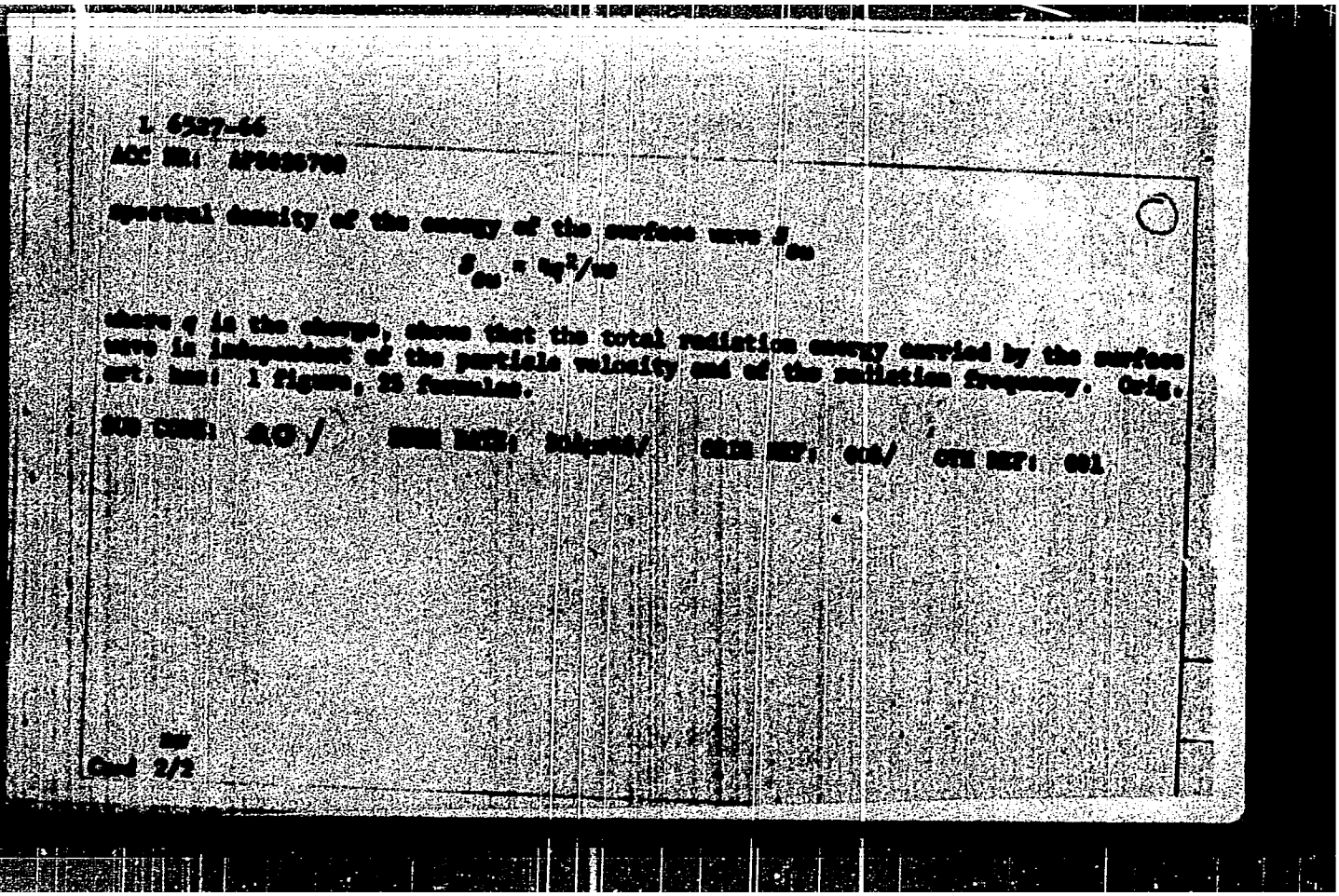
NARYSHKINA, L.G.

Radiation from a charged particle moving in a dielectric layer. Zhur. tekh. fiz. 33 no.11:1318-1322 N '63. (MIRA 16:12)

1. Moskovskiy inzhenerno-fizicheskiy institut.



L 6327-66 EWT(1)
ACC NR: AP5027703 SOURCE CODE: UR/0141/65/008/005/0938/0941
AUTHOR: [illegible]
ORG: Moscow State Pedagogical Institute im. V. I. Lenin (Moskovskiy gosudarstvennyy pedagogicheskiy institut)
TITLE: Transient radiation of an electrically conducting plane
SOURCE: IVUZ. Radiofizika, v. 8, no. 5, 1965, 938-941
TOPIC TAGS: charged particle, electromagnetic wave generation, electromagnetic energy
ABSTRACT: The article treats the radiation arising from the flight of a charged particle through a dense, ideally conducting lattice which, for a lattice constant $l \ll \lambda$ (where λ is the length of the radiated wave), can be regarded as a plane conducting in one direction. The radiation field and the radiation energy and its angular distribution were determined, and the characteristics of the radiation of fast electron beams by the flying charge are analyzed. The formula derived for the
UDC: 621.371
Card 1/2
2701 2024



L 6327-66
ACC NR: AP6035798

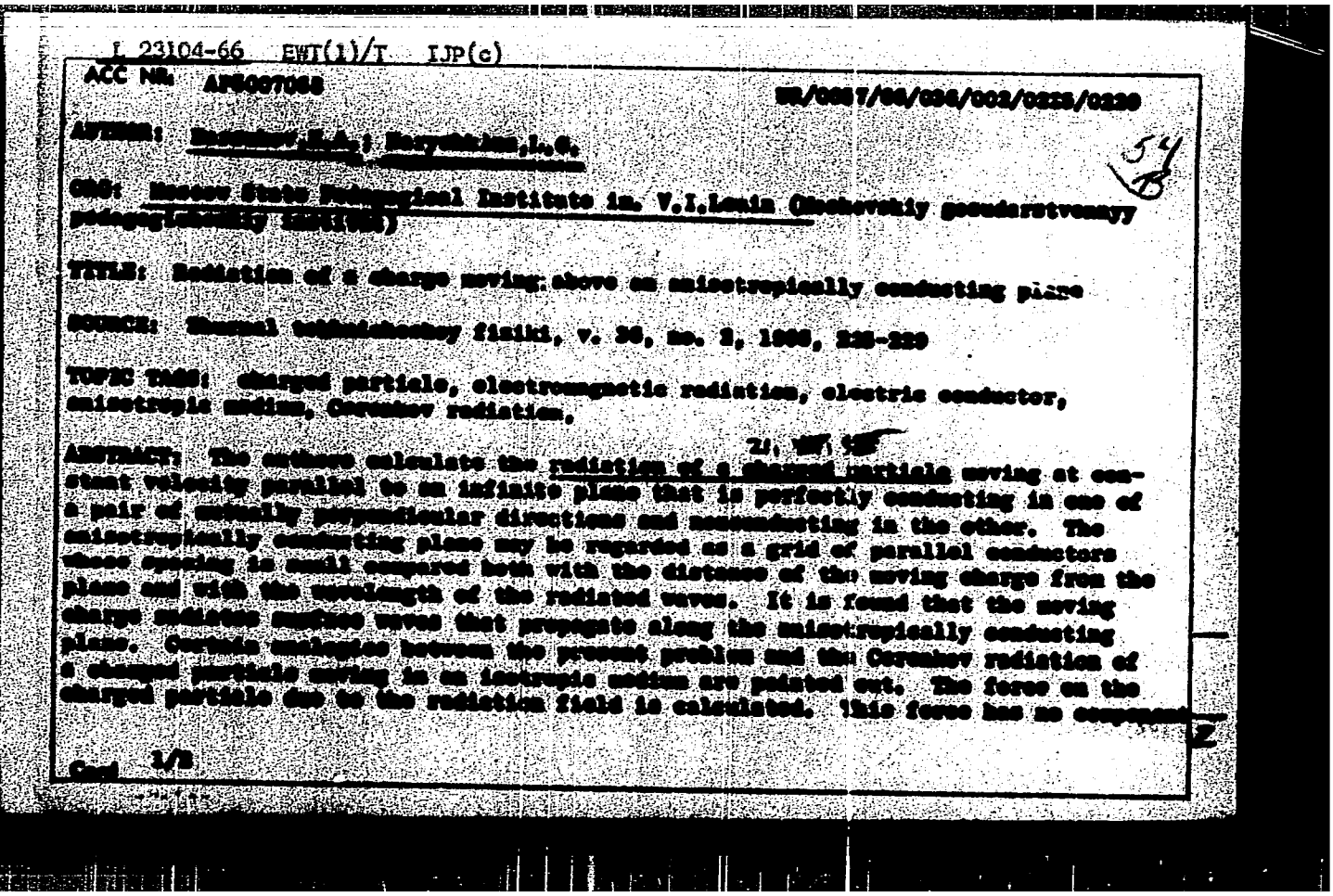
spectral density of the energy of the surface wave S_{ω}

$$S_{\omega} = kq^2/\omega$$

where q is the charge, shows that the total radiation energy carried by the surface wave is independent of the particle velocity and of the radiation frequency. Orig. art. has: 1 figure, 25 formulas.

SUB CODE: 20/ SUBM DATE: 30Apr65/ ORIG REF: 004/ OTH REF: 001

Card 2/2



L 23104-66 EWT(1)/T IJP(c)

ACC NR: AP6007068

SOURCE CODE: UR/0057/66/036/002/0225/0230

AUTHOR: [illegible]

ORG: Moscow State Pedagogical Institute im. V.I.Lenin (Moskovskiy gosudarstvennyy pedagogicheskiy institut)

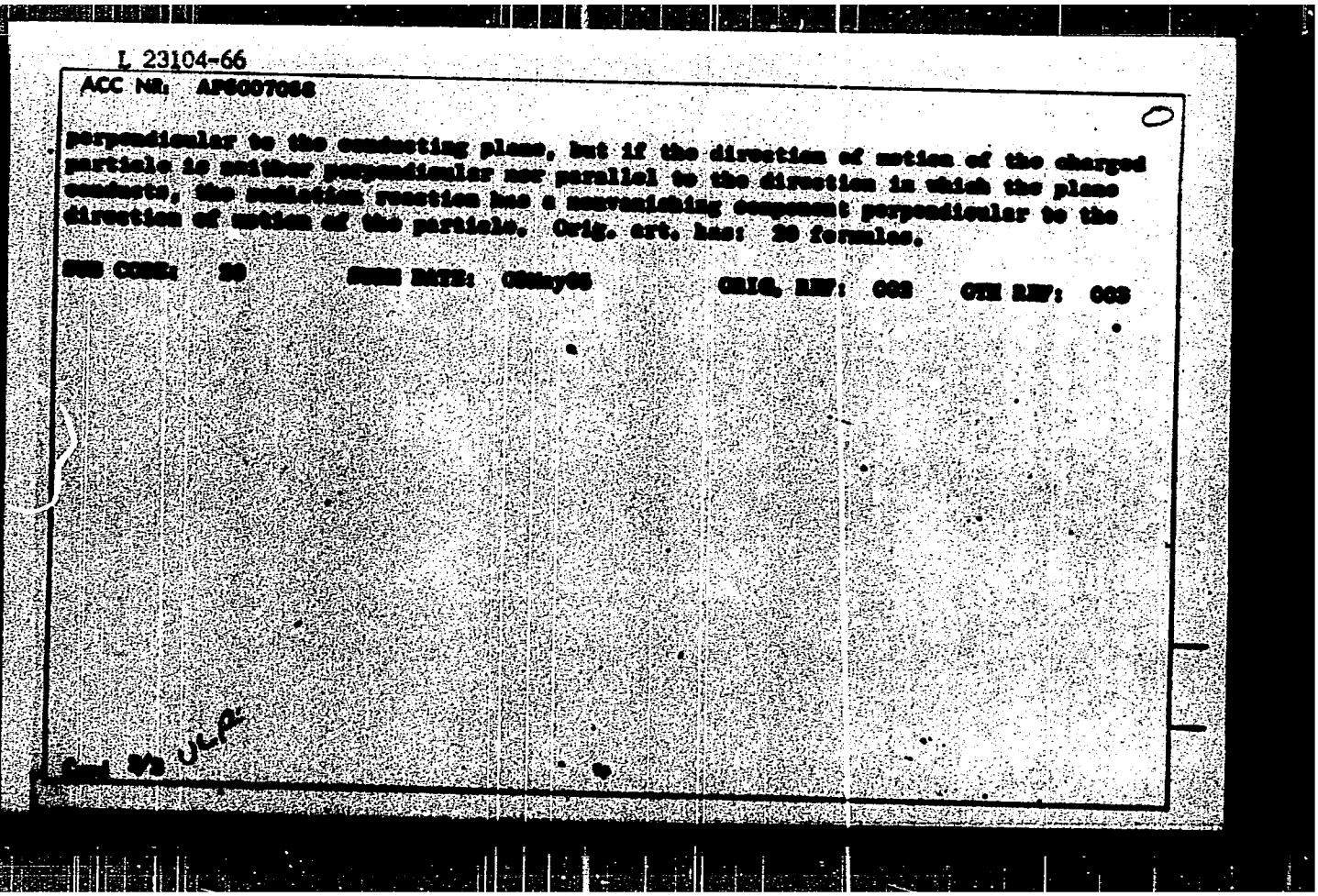
TITLE: Radiation of a charge moving above an anisotropically conducting plane

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 2, 1966, 225-230

TOPIC TAGS: charged particle, electromagnetic radiation, electric conductor, anisotropic medium, Cerenkov radiation

ABSTRACT: The authors calculate the radiation of a charged particle moving at constant velocity parallel to an infinite plane that is perfectly conducting in one of a pair of mutually perpendicular directions and nonconducting in the other. The anisotropically conducting plane may be regarded as a grid of parallel conductors whose spacing is small compared both with the distance of the moving charge from the plane and with the wavelength of the radiated waves. It is found that the moving charge excites surface waves that propagate along the anisotropically conducting plane. Certain analogies between the present problem and the Cerenkov radiation of a charged particle moving in an isotropic medium are pointed out. The force on the charged particle due to the radiation field is calculated. This force has no component

Card 1/2



L 23104-66
ACC NR: AP6007088

perpendicular to the conducting plane, but if the direction of motion of the charged particle is neither perpendicular nor parallel to the direction in which the plane converts, the radiation reaction has a nonvanishing component perpendicular to the direction of motion of the particle. Orig. art. has: 20 formulas.

SUB CODE: 20 SUBM DATE: 05May65 ORIG REF: 002 OTH REF: 003

Card 2/2 JKP

L 33415-66 EWT(1)
ACC NR: AP6015300 (A, N) SOURCE CODE: UR/0057/66/036/005/0800/0805

AUTHOR: Barsukov, K. A.; Naryshkina, L. G.

ORG: Moscow State Pedagogical Institute im V.I.Lenin (Moskovskiy gosudarstvennyy pedagogicheskiy institut)

TITLE: On the Vavilov-Cerenkov effect for surface waves

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 5, 1966, 800-805

TOPIC TAGS: Cerenkov effect, Cerenkov radiation, surface wave, dielectric layer, dielectric constant, isotropic plasma, charged particle

ABSTRACT: The authors discuss surface waves induced on the infinite plane interface between a dielectric and the vacuum by a charged particle moving with constant velocity parallel to the boundary. Surface waves can propagate on such a boundary only if the dielectric constant of the dielectric is negative. When this is the case surface waves are excited by the charged particle regardless of its velocity. The case is discussed in detail of the boundary between the vacuum and a plasma whose dielectric constant is $1 - f_0^2/f(f - iF)$, where f_0 is the plasma frequency, f is the wave frequency, and F is the effective collision frequency. Formulas are derived for the energy and spectrum of the induced surface waves. When the velocity of the charged particle is very low the frequencies of the induced waves are concentrated

Card 1/2 UDC: 538.567

L 33415-66

ACC NR: AP6015300

near the value $f_0/2^{1/2}$, where they are strongly absorbed and cannot be observed; the induced waves become observable only when the velocity of the charged particle is large compared with $2.4c(f/f_0)^{1/2}$, where c is the velocity of light. The conclusion of A.G.Sitenko and V.S.Tkalich (ZhtF, 39, 1074, 1969) that the charged particle loses energy by polarization radiation at certain discrete frequencies is shown to be incorrect, and the mathematical error that led these authors to this incorrect conclusion is pointed out. Orig. art. has: 24 formulas.

SUB CODE: 20/ SUBM DATE: 15Mar66/ ORIG REF: 004/ OTH REF: 00[illegible]

Card 2/2 UDC

ACC NR: AP6023866 SOURCE CODE: UR/0109/66/011/007/1189/1195

AUTHOR: Naryshkina, L. G.

ORG: none

TITLE: Doppler effect in surface waves

SOURCE: Radiotekhnika i elektronika, v. 11, no. 7, 1966, 1189-1195

TOPIC TAGS: Doppler effect, electromagnetic wave

ABSTRACT: The Doppler effect is theoretically considered when an oscillator travels along a planar boundary of an isotropic dielectric that has negative dielectric constant. The spectrum of the surface wave can be calculated from: $\omega = \omega_0 / |1 - \beta\sqrt{|\varepsilon| / (|\varepsilon| - 1)}\cos\varphi|$, where ω_0 - oscillator frequency, β - a parameter, φ - angle between vector $k_\perp$ and Ox-axis. The above nonlinear equation determing Doppler frequencies has several solutions with fixed φ and β ;

UDC: 535.338.334

Card 1/2

ACC NR: AP6023866

its roots are determined graphically. Formulas for the intensity of surface waves excited by a moving oscillator are also given. By using the Pointing-vector techniques, a differential equation is set up which describes the energy of the surface electromagnetic wave and the angular distribution of the radiated energy. This distribution essentially differs from that involved in the conventional Doppler effect. Orig. art. has: 3 figures and 33 formulas.

SUB CODE: 09 / SUBM DATE: 15Mar65 / ORIG REF: 007

Card 2/2

KARPUKHIN, V.I., kand. med. nauk (Moskva); NARYSHKINA, N.P. (Moskva); POGREBNYAK, V.S. (Moskva)

Surgical treatment of acute cholecystitis in the surgical department of a hospital. Khirurgiia 40 no.3:49-54 Mr '64. (MIRA 17:9)

MARYSHKINA, R.

The collection "Patent legislation in capitalist countries."
Vnesh. torg. 30 no.4:38-39 '60 (MIRA 13:3)
(Patent laws and legislation)

KRAVCHENKO, A.A. (Moskva); PASTERNAK, A.Ya. (Moskva); NARYSHKINA, T.F. (Moskva); VOL'FSON, M.T. (Moskva)

Occupational pathology of the otolaryngological organs in workers of cotton mills. Gig. truda i prof. zab. 4 no.6:41-43 Je '60. (MIRA 15:4)

1. Moskovskiy oblastnoy klinicheskiy institut imeni M.F.Vladimirskogo, Institut sanitarii i gigiyeny imeni F.F.Erismana i Bol'shaya fabriki "Krasnyy tekstil'shchik".

(COTTON MANUFACTURE--HYGIENIC ASPECTS) (OTOLARYNGOLOGY)

SHUYKIN, N.I.; NOVIKOV, S.S.; MARYSHKINA, T.I.

Nature of sexavalent hydrocarbons of higher fractions in Maikopsk benzene. Izv.Akad.nauk SSSR; Khim.otd. no.2:115-119 Mar-Apr 51. (CLML 20:7)

1. Institute of Organic Chemistry of the Academy of Sciences USSR.

MARYSHKINA T.I.

SHUYKIN, N.I.; NOVIKOV, S.S.; MARYSHKINA, T.I.

Thermal conversions of 1,3-pentadiene. Izv. AN SSSR Otd.khim. nauk no.5:898-903 S-O '54. (MLRA 8:3)

1. Institut organicheskoy khimii im.N.D.Zelinskogo Akademii nauk SSSR.
(Piperylene)

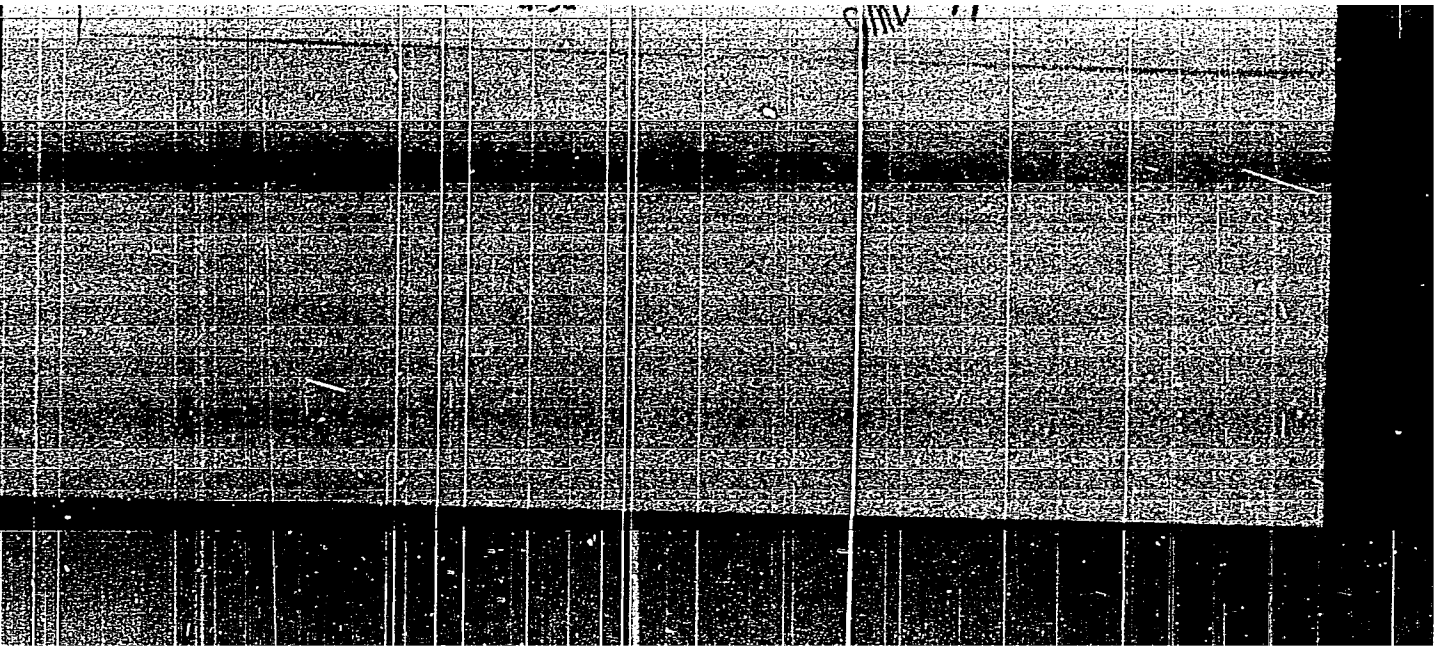
MARYSHKINA, T.I.

SHUYKIN, N.I.; MARYSHKINA, T.I.

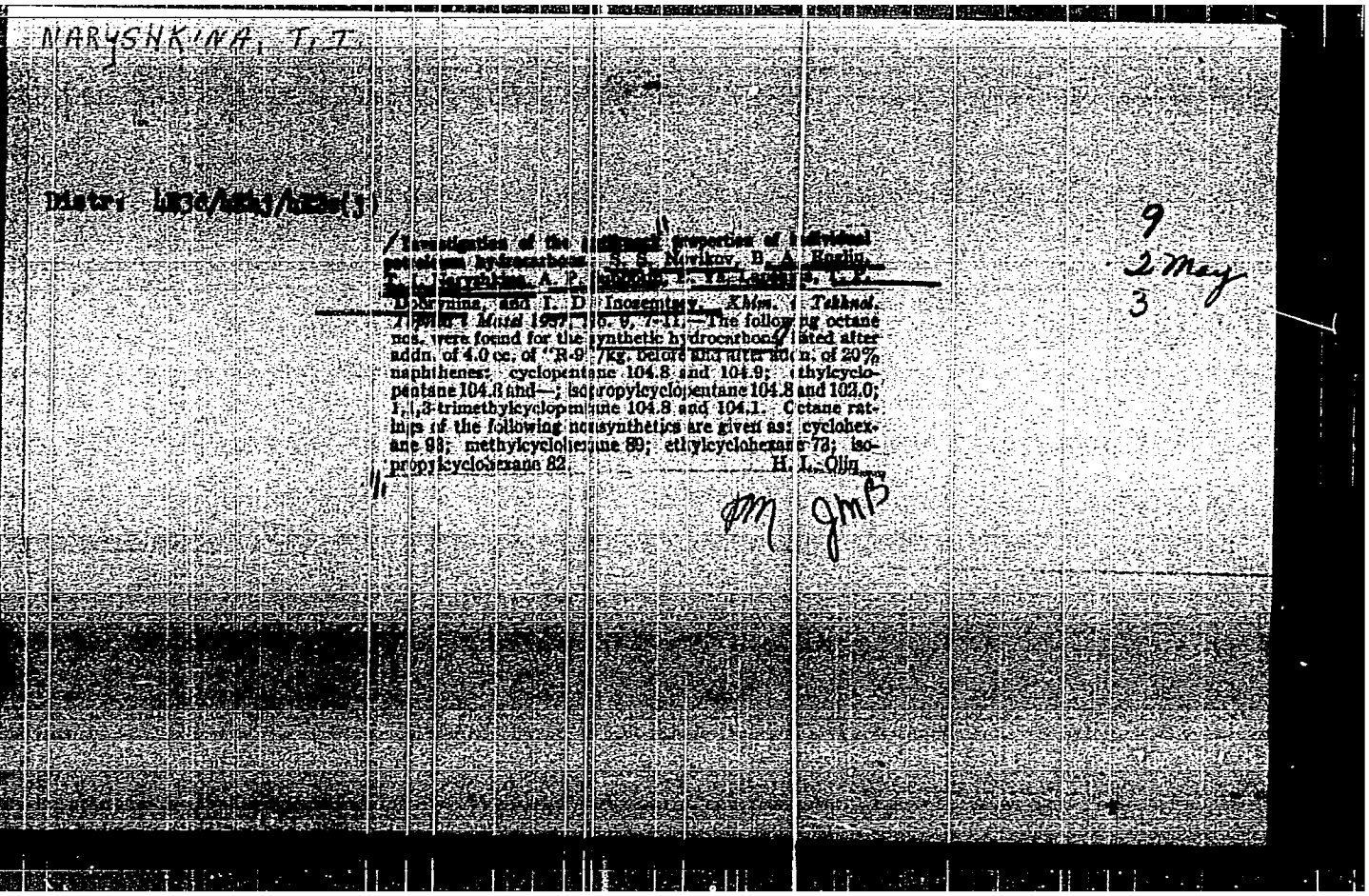
Thermal conversion of 1,3-pentadiene under various pressures.
Izv.AN SSSR. Otd.khim.nauk no.10:1249-1255 O '56. (MLRA 9:12)

1. Institut organicheskoy khimii imeni N.D. Zelinskogo Akademii nauk SSSR.

(Piperylene)



APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001136110007-1"



MARYSHKINA, T. T.

Distr: [illegible]

Investigation of the [illegible] properties of [illegible] petroleum hydrocarbons. S. S. Nametkin, D. A. Kudlin, [illegible] Yu. Lantsova, [illegible] A. P. [illegible] T. T. Maryshkina, and I. D. Inosemtsev. *Khim. i Tekhnol. Topliv i Masel* 1957, no. 9, 7-11.—The following octane nos. were found for the synthetic hydrocarbons isolated after addn. of 4.0 cc. of "R-9"/kg. before and after addn. of 20% naphthenes: cyclopentane 104.8 and 104.9; ethylcyclopentane 104.8 and —; isopropylcyclopentane 104.8 and 102.0; 1,1,3-trimethylcyclopentane 104.8 and 104.1. Octane ratings of the following nonsynthetics are given as: cyclohexane 93; methylcyclohexane 89; ethylcyclohexane 73; isopropylcyclohexane 82. H. L. Olin

9
2 May
3

NARYSHKINA, T.I.

SHUYKIN, N.I.; NARYSHKINA, T.I.

All-Union conference on the chemical processing of petroleum hydrocarbons into semifinished products for the synthesis of fibers and plastics. Izv. AN SSSR Otd. khim. nauk no.10:1272-1275 O '57. (MIRA 11:3)

(Baku--Petroleum products)
(Plastics)
(Textile fibers, Syntaetic)

Maryshkina T I

AUTHORS: Shuykin, N. I., Corresponding Member of the AN USSR; Maryshkina, T. I.; 30-9-36/48

TITLE: The Synthesis of Synthetic Fibers and Plastics From Petroleum Hydrocarbon (Sintez volokon i plasticheskikh mass iz neftyanykh uglevodorodov).

PERIODICAL: Vestnik AN SSSR, 1957, Vol. 27, Nr 9, pp. 114-117 (USSR)

ABSTRACT: From May 27 to June 2 a consultation on a Union scale took place in Baku which dealt with the hitherto obtained research-data concerning the working up and utilization of petroleum-hydrocarbon for the above-mentioned purposes. More than 400 representatives of industry and economy as well as numerous scientists participated in this consultation. The chief engineer of the Azerbaidzhan United Petroleum Fatories in his report analyzed the various possibilities of the utilization of the hydrocarbons of petroleum. Topchiyev and Krentsel' talked on the stereoregular polyolefins and devoted their attention to the important problems of the production of crystalline polypropylene. Several papers dealt with the new methods of the production of caprolactam according to the scheme cyclohexane → cyclohexanonoxim →

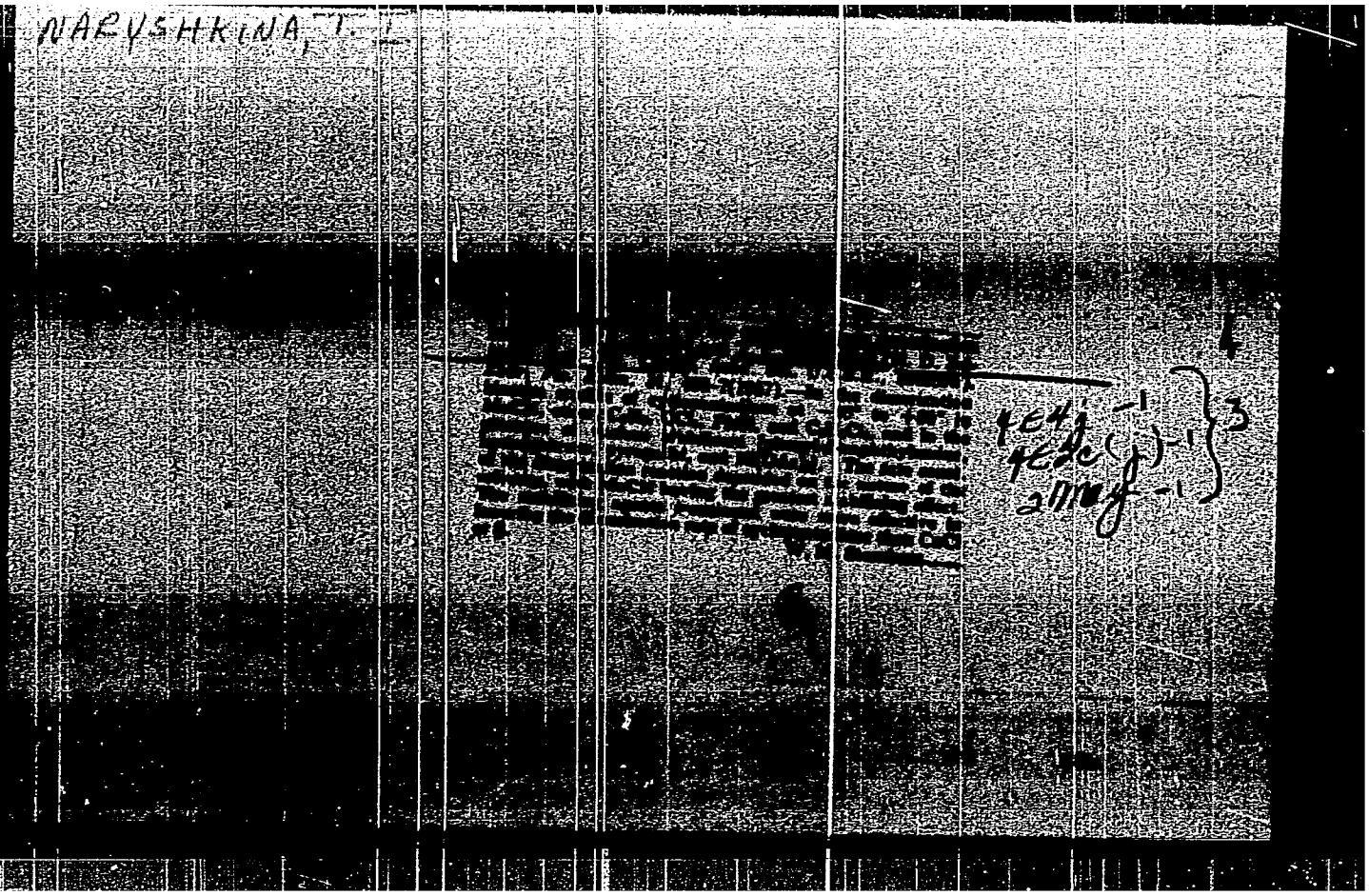
Card 1/2

The Synthesis of Synthetic Fibers and Plastics From Petroleum Hydrocarbon 30-9-36/48

caprolactam. A Bashkirov among others reported on the new method of the production of aliphatic amines on the basis of hydrocarbon-oxide, nitrogen and ammonia. The research works in the domain of electro- and thermo-cracking of the hydrocarbon-composition $C_2 - C_4$ are continued.

AVAILABLE: Library of Congress.

Card 2/2



20-2-32/60

AUTHORS: Shuykin, N. I. , Corresponding Member of the AS USSR, Naryshkina, T. I.

TITLE: Catalytic Dehydrogenation of Cyclopentane (Kataliticheskaya degidrogenizatsiya tsiklopentena)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 2, pp.351-353 (USSR)

ABSTRACT: Only few scientific investigations have dealt with conversions of cyclopentane under the above circumstances. On the other hand, a number of papers have suggested that it is possible to obtain cyclopentadiene directly by dehydrogenation of cyclopentane. The respective yields, however, amounted only to 3 - 11 %. The authors of the paper under review set themselves the task of finding conditions under which this conversion takes place as completely as possible. It was discovered that at 600°, in the presence of an alumochromium catalyzer, up to 58 % cyclopentadiene can be obtained. As this dehydrogenation takes place with an increase in volume

Card 1/3

Catalytic Dehydrogenation of Cyclopentane

and as consequently the decrease in pressure must shift the equilibrium from left to right, this reaction was carried out at reduced pressure (20 mm). Cyclopentane was obtained by dehydration of cyclopentanol over magniumsulphate free of water at 310 - 315°. The results are represented in Table Nr 1 of the present paper. It follows therefrom that when the temperature increases from 500 to 600° also the concentration of cyclopentadiene in the catalyzer increases. The highest yield, however, was obtained at 600°. It can be seen from the data contained in Table Nr 2 of the paper under review that the catalysate of the cyclopentane consists mainly of cyclopentadiene, furthermore of a small amount of the unchanged cyclopentadiene, and of a rest. The analysis of carbonaceous deposits at the catalyzer has shown that, as far as their composition is concerned, they are close to the polymer of cyclopentadiene. Thus the reaction of dehydrogenation of cyclopentane under reduced pressure and on active dehydrating contact makes it possible to considerably limit the subsidiary processes and to concentrate the reaction on cyclo-

Card 2/3

Catalytic Dehydrogenation of Cyclopentane 20-2-32/60

pentadiene with a high yield. In addition to the main reaction, we have minor coke formation and hydrocracking of cyclopentane, leading mainly to the production of gaseous products from C_2 and C_3. There are 1 figure, 1 table, and 14 references, 8 of which are Soviet.

ASSOCIATION: Institute of Organic Chemistry imeni N. D. Zelinskiy, AS USSR
(Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR)

SUBMITTED: January 14, 1957

AVAILABLE: Library of Congress

Card 3/3

[redacted]

[redacted]

[redacted]

[redacted]

62-58-3-10/30

AUTHORS: Shuykin, N. I. , Maryshkina, T. I.

TITLE: The Contact-Catalytic Dehydrocyclization of Pentadiene-1,3 (Kontaktno-kataliticheskaya degidrotsiklizatsiya pentadiyena-1,3)

PERIODICAL: Izvestiya Akademii Nauk SSSR,Otdeleniye Khimicheskikh Nauk, 1958, Nr 3, pp. 316 - 323 (USSR)

ABSTRACT: Too little interest has hitherto been shown in the contact--catalytic conversions. The occurrence of a geometric isomerism as well as mobile hydrogen atoms in piperilene makes an investigation of the above-mentioned contact-conversions especially interesting. They had already been investigated by Zal'manovich and Tsiper. An indication to the possibility of a reaction of the dehydrocyclization of piperilene is contained in the papers by Kennedy and Hetzel. The authors of this paper investigated the thermal conversions of piperilene. In connection with this (and as a confirmation of the assumption) it became evident that this reaction is a catalytic one, and that the yields of cyclopentadiene depend on

Card 1/2

62-58-3-10/30

The Contact-Catalytic Dehydrocyclization of Pentadiene-1,3

the nature of the catalyst. In the present paper the authors describe the investigated reaction of the dehydrocyclization of piperilene in the presence of diverse catalysts. The yields of cyclopentadiene are very high: 18,6 - 18,4 %. The reaction takes place in contact with an aluminum-potassium dichromate-catalyst and 5 % Pt-black. The obtained results confirm the assumption of the catalytic nature of the dehydrocyclization reaction of piperilene. The authors also studied the influence of temperature, pressure and so on. They found the optimum conditions of the formation of cyclopentadiene. They worked out a scheme for the analysis of the complicated mixture of the catalytic dehydrocyclization products of piperilene. There are 2 figures, 5 tables, and 12 references, 7 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institut for Organic Chemistry imeni N. D. Zelinskiy, AS USSR)

SUBMITTED: November 3, 1956

Card 2/2

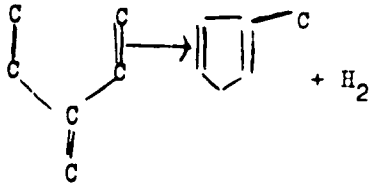
NARYSHKINA, T. I.

AUTHORS: Shuykin, N. I., Naryshkina, T. I. 62-58-4-23/32

TITLE: Catalytic Dehydrocyclization of 2-Ethylbutadiene (Kataliticheskaya degidrotsiklizatsiya 2-etilbutadiyena).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Khimicheskikh Nauk, 1958, Vol. - Nr 4, pp. 508-510 (USSR)

ABSTRACT: Recently the authors showed that a reaction of catalytic dehydrocyclization of alkanes can also take place with the formation of five-membered cyclanes. In the present paper it was shown that 2-ethylbutadiene also has the capability to cyclize in methylcyclopentadiene-1,3 (in a yield of up to 38% :



From the comparison of the results of the investigations described in this paper with the data obtained in the dehydrocyclization of alkadienes it is seen that: hydrocarbons (composition

Card 1/2

Catalytic Dehydrocyclization of 2-ethylbutadiene. 62-58-4-23/32

C_6) with a ramified carbon chain are especially inclined to dehydrocyclization. There are 2 tables, and 10 references, 9 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute for Organic Chemistry imeni N. D. Zelinskiy, AS USSR)

SUBMITTED: November 19, 1957

AVAILABLE: Library of Congress

1. Ethylbutadiene—Catalytic dehydrocyclization

Card 2/2

NARYSHKINA, T. I

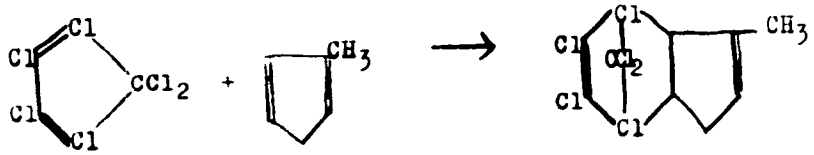
AUTHORS: Kukalenko, S. S., Mel'nikov, N. N., Naryshkina, T. I., Shuykin, N. I.

79-2-43/6

TITLE: Organic Insecticides and Fungicides (Iz oblasti organicheskikh insektofungitsidov) XXXIII. Synthesis of Some Derivatives of 4,7-Endomethylenetetrahydroindan (XXXIII. Sintez nekotorykh proizvodnykh 4,7-endometilentetragidroindana).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 480-483 (USSR)

ABSTRACT: In order to investigate the insecticide-properties of chlordane and heptachlorine homologues, an adduct was obtained from hexachlorocyclopentadiene and 3-methylcyclopentadiene-2,4 by heating at 85-105°C. It is assumed that the reaction takes place as follows:



The product, a yellow viscous liquid, was chlorinated or bromized resp. and the compounds obtained were tested for their in-

Card 1/2

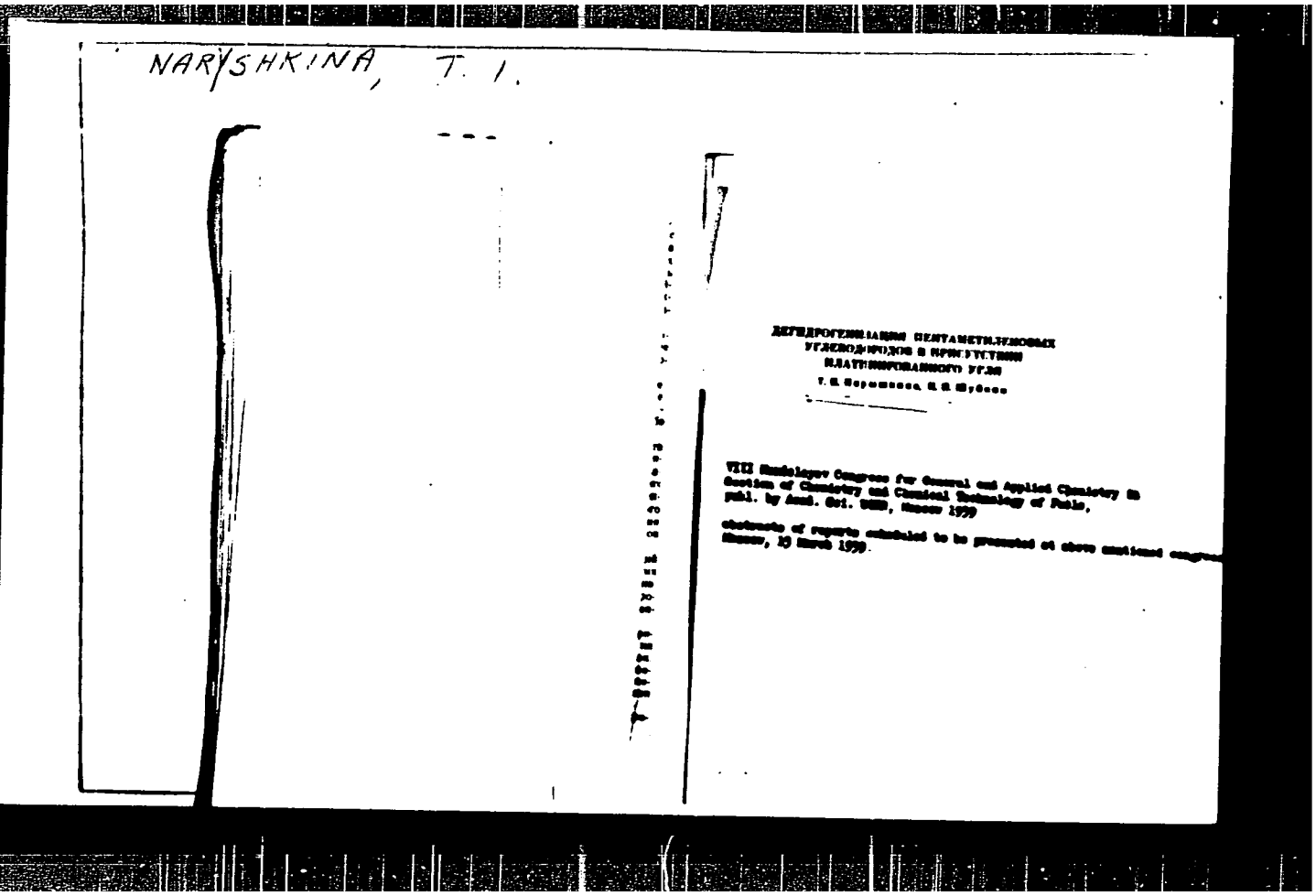
Organic Insecticides and Fungicides. XXXIII. Synthesis of Some Derivatives of 4,7-Endomethylenetetrahydroindan.

secticide-properties. It was found that all of them have a lower insecticide effect than "chlordane". These compounds have hitherto not been described in technical literature. The working methods and the specific data of the compounds are given. There are 5 references, 2 of which are Slavic.

ASSOCIATION: Scientific Institute for Fertilizers, Insecticides and Fungicides and Institute for Organic Chemistry AS USSR (Nauchnyy institut po udobreniyam i insektofungitsidam i Institut organicheskoy khimii Akademii nauk SSSR).

SUBMITTED: January 16, 1957

AVAILABLE: Library of Congress



NARYSHKINA, T. I.

ДЕГИДРОГЕНИЗАЦИЯ ПЕНТАМЕТИЛЕНОВЫХ УГЛЕВОДОРОДОВ В ПРИСУТСТВИИ [illegible]

[illegible]

VIII Mendeleyev Congress for General and Applied Chemistry in Section of Chemistry and Chemical Technology of Fuels, publ. by Acad. Sci. USSR, Moscow 1959

[illegible] of reports scheduled to be presented at above mentioned congress, 30 March 1959.

MARYSHKINA, T. I., SHUYKIN, N. I.

"Catalytic Synthesis of Cyclopentadiene Hydrocarbons."

Report submitted at the Fifth World Petroleum Congress, 30 May - 5 June 1959. New York.

S/595/60/000/000/011/014
E040/E435

AUTHORS: Shuykin, N.I., Naryshkina, T.I.

TITLE: Catalytic synthesis of cyclopentadiene series of hydrocarbons

SOURCE: Vsesoyuznoye soveshchaniye po khimicheskoy pererabotke neftyanykh uglevodorodov v poluprodukty dlya sinteza volokon i plasticheskikh mass. Baku, 1957 Baku, Izd-vo AN Azerb, SSR, 1960. 249-259

TEXT: In view of the importance of hydrocarbons of the cyclopentadiene series because of their high reactivity, the present authors studied their production 1) by catalytic dehydrocyclization of diolefinic hydrocarbons and 2) by catalytic dehydrogenation of five-member cyclanes into cyclenes. The optimum dehydrocyclization conditions for piperylene were found to be at 600°C under reduced pressure (20 to 25 mm Hg). Alumino-chrome-potassium catalyst was found to give the highest yield of (I) and to have a useful active life of up to 80 hours. A much higher yield of 47% was obtained under the same reaction conditions in dehydrocyclization of piperylene-3-methylpentadiene-1,3 to methylcyclopentadiene. 2-ethylbutadiene formed easily methylcyclopentadiene with

Card 1/4

38% yield. The reaction is sensitive to pressure. Dehydrocyclization of piperylene under a slightly reduced pressure leads to some isomerization to isoprene and pentadiene-1,4 and to hydrogenation giving pentenes and 2-methylbutene-1. A considerable quantity of aromatic hydrocarbons is formed if the reaction is carried out under atmospheric pressure: at 600°C and atm pressure piperylene gives a 50% yield of benzole, toluol and xylol. By carrying out the reaction at reduced pressure and re-cycling the non-reacted piperylene, the yield of (I) is raised to 40%. The two methods of (I) preparation were studied on pentadiene-1,3 3-methylpentadiene-1,3 and 2-ethylbutadiene-1,3 (dehydrocyclization method) and on cyclopentene, methylcyclopentene and cyclopentane (dehydrogenation method). The reactions were carried out in a quartz tube, 18 mm in diameter at 500 to 600°C, the pressure being varied from atmospheric to 20 to 25 mm Hg. The yield of (I) in the reaction products was determined using B.N.Afanas'yev's method (Ref.1: Zavodskaya laboratoriya, no.12, 1948, 1493). The catalysate was fractionated and analysed by optical and chemical methods. Evaluation was made of a number of catalysts but a mixture of Al_2O_3 (84%) + Cr_2O_3 (14%) + K_2O (2%) ground to a

specific surface of 97.9 cm^2/g was found to be the most effi[illegible]. Complete results are reported including data for the composition of all catalysts tried and the reaction products identified in the catalysate. It is concluded that cyclopentadiene and its homologues can be obtained by dehydrocyclization of diene hydrocarbons of the aliphatic series and dehydrogenation of five-member cyclanes and cyclenes, the yield of (I) in dehydrocyclization of alkadienes being 18 to 47%. Dehydrogenation of cyclenes gives up to 58% of (I). Under the same conditions, cyclopentane and methylcyclopentane are dehydrogenated in 14 to 31% yield. The optimum conditions for cycloalkadiene formation from the above hydrocarbons are at 600°C and 20 to 25 mm Hg. Acknowledgments are expressed to Yu.P.Yegorov for his assistance. Academician S.V.Lebedev is mentioned in connection with his method for the production of divinyl. There are 1 figure, 5 tables and 41 references: 14 Soviet-bloc, 1 English translation from Soviet publication and 26 non-Soviet-bloc. The four most recent references to English language publications read as follows:
Ref 26: Jones T.G. US Patent 2,636,066, 1953; C.A., 47, 6645 1953

Catalytic synthesis of ...

S/595/60/000/000/011/014
E040/E435

Ref.27: Kennedy R.M., Hetzel S.J. Industr. Engng. Chem. 42 1950 547 Ref.28: Lodge W.V., Walters W.D. J. Am. Chem. Soc 74 1952 451. Ref.29: Mundy C.W. J. Oil Colour. Chemist. Assoc 38 1955 219.

Card 4/4

84869

S/079/60/030/010/005/030
B001/B075

11.1210

AUTHORS: Naryshkina, T. I. and Shuykin, N. I.

TITLE: Synthesis of New Homologs of Cyclopentadiene

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 10, pp. 3205-3207

TEXT: Due to its difficult production, the chemistry of highly active cyclopentadiene homologs - unlike the cyclopentadiene itself - has hitherto not been thoroughly investigated. The synthesis of cyclopentadiene homologs described in Refs. 1 and 2 is reliable but somewhat complicated. The synthesis mentioned in Ref. 3 has to be improved in order to reach a higher purity and yield of the final products, cyclopentadiene and methyl cyclopentadiene. As cyclopentadiene yields organometallic derivatives (e.g., cyclopentadiene potassium), alkyl or aryl radicals can be introduced into its ring. However, this method only leads to cyclopentadiene hydrocarbons having substituents in the CH_2 group. Thus, homologs of cyclopentadiene having C_1-C_4 substituents (Refs. 5, 6) in position 5 were synthesized, as well as gem-substituted cyclopentadienes

Card 1/2

84869

Synthesis of New Homologs of Cyclopentadiene S/079/60/030/010/005/030
B001/B075

(Refs. 5, 6). The principal problem of the present paper was the synthesis of unknown cyclopentadiene homologs having alkyl substituents in positions 1 or 2. The synthesis proceeded in three stages. As these stages are not accompanied by an isomerization, alkyl cyclopentaienes of a specific structure can be obtained on the strength of the known structure of cyclopentene. Thus, e.g., a transition from 1-alkyl cyclopentenes-1 to 2-alkyl cyclopentadienes is possible, whereas the cyclopentadiene homologs with alkyl substituents in position 1 are obtained from 2-alkyl cyclopentenes-1. In this way, 1-methyl, 2-ethyl, and 2-n-propyl cyclopentadienes were synthesized. There are 7 references: 3 Soviet, 1 French, 2 German, and 1 Czechoslovakian.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR
(Institute of Organic Chemistry of the Academy of Sciences USSR)

SUBMITTED: November 30, 1959

Card 2/2

SHUYKIN, N.I.; MARYSHKINA, T.I.

Dehydrogenation of five-membered cyclenes in the presence of activated carbon. Dokl. AN SSSR 135 no.1:105-108 N'60.
(MIRA 13:11)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
2. Chlen-korrespondent AN SSSR(for Shuykin).
(Dehydrogenation) (Cycloalkenes)

S/020/61/136/004/017/026
B016/B075

AUTHORS: Shuykin, N. I., Corresponding Member AS USSR and Maryshkina, T. I.

TITLE: Dehydrogenation of 5- and 6-Membered Cyclanes in the Presence of Active Charcoal

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 4, pp. 849-851

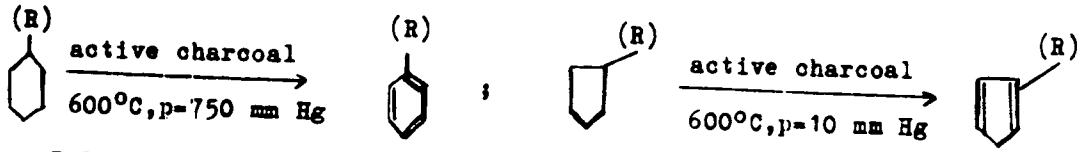
TEXT: The authors report on their study of the catalytic properties of active charcoal (of the Perm' Works) in dehydrogenating cyclopentane (I), methyl cyclopentane (II), cyclohexane (III), and methyl cyclohexane (IV). A parallel investigation was performed concerning the influence exerted by temperatures between 550° and 600°C upon cyclanes without the use of charcoal. Results are summarized in Table 1. From these data, the authors concluded that, under the action of charcoal, the cyclanes are subjected to a strong dehydrogenation into corresponding products. Thus, 97% benzene are produced from (III) at 600°C, and 100% toluene from (IV) at

Card 1/

Dehydrogenation of 5- and 6-Membered Cyclanes in the Presence of Active Charcoal

S/020/61/136/004/017/026
B016/B075

atmospheric pressure. At a pressure of 10-15 mm Hg, (I) and (II) are converted into the corresponding pentadienes with a yield of 18 or 29%, respectively.



where R=H or CH_3. Neither (I) nor (II) could be dehydrogenated at 600°C without charcoal. At 550°C, (III) remained unchanged, (IV), however, yielded 2% toluene (at 600°C, 6%). At 600°C, (III) yielded 6% benzene. There are 1 table and 10 Soviet references.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo (Institute of Organic Chemistry imeni N. D. Zelinskiy, Academy of Sciences USSR)

SUBMITTED: September 30, 1960

Card 2/4

SHIYKIN, N.I.; MARYSHKINA, T.I.

Catalytic activity of birchwood carbon in the reaction of cyclohexane dehydrogenation. Izv. AN SSSR Otd.khim.nauk no.2:320-324 F '62. (MIRA 15:2)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Cyclohexane)
(Dehydrogenation)
(Carbon, Activated)

SHUYKIN, N.I.; MARYSHKINA, T.I.; RASHCHUPKINA, Z.A.

Catalytic dehydrocyclization of 2,4-dimethyl-1,3-pentadiene and 1,3-heptadiene. Neftekhimia 2 no.1:44-47 Ja-F '62. (MIRA 15:5)

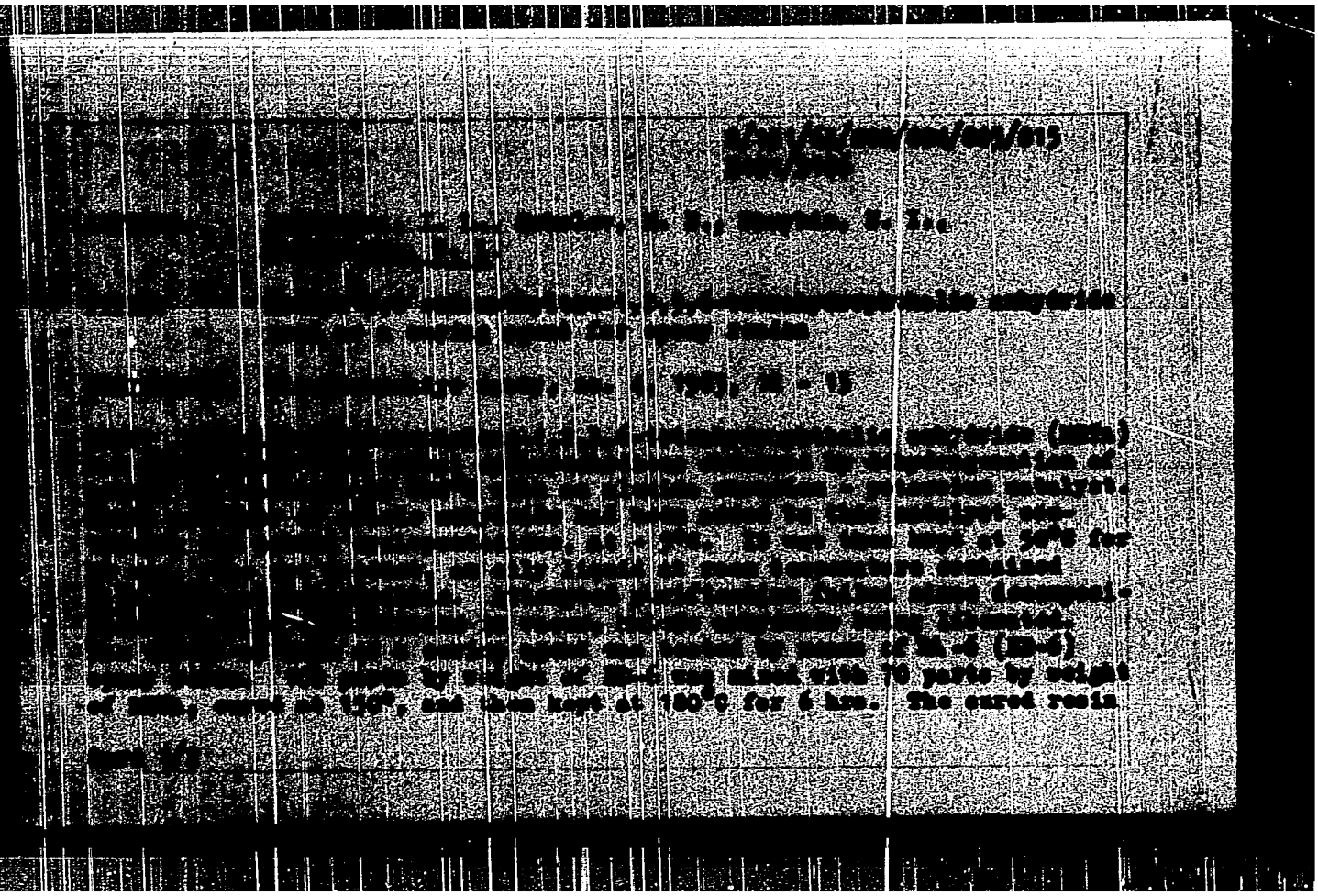
1. Institut organicheskoy khimii AN SSSR im. N.D.Zelinskogo.
(Pentadiene) (Aromatization) (Heptadiene)

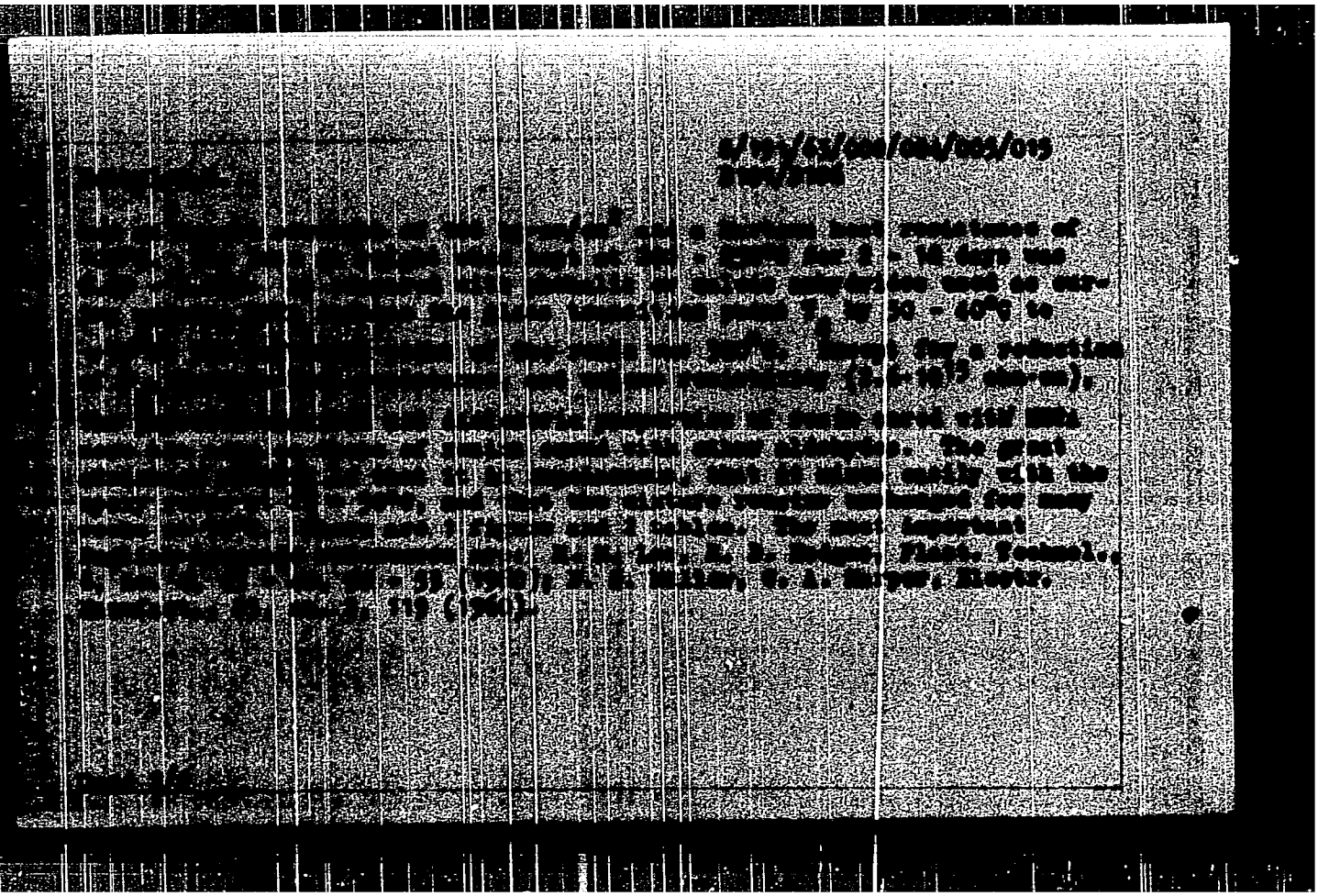
SHUYKIN, N. I.; NAUMYSHKINA, T. I.

Catalytic dehydrogenation of petroleum methylcyclopentane.
Neftekhimia 2 no.4:473-479 Jl-Ag '62. (MIRA 15:10)

1. Institut organicheskoy khimii AN SSSR imeni N. D. Zelinskogo.

(Cyclopentane) (Dehydrogenation)





SOBOLEV, Yu.V.; ALEKSANYAN, V.T.; MARYSHKINA, T.I.

Conformational state of 2,4-dimethyl-1,3-pentadiene and 3-methyl-1,3-pentadiene. Zhur.struk.khim. 4 no.3:354-357 My-Je '63. (MIRA 16:6)

1. Komissiya po spektroskopii AN SSSR, Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR i Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
(Pentadiene) (Stereochemistry)

SHUYKIN, N.I.; NARYSHKINA, T.I.; RASHCHUPKINA, Z.A.; AVERINA, Ye.Ye.

Catalytic dehydrogenation of methylcyclopentene. Neftekhimiia 3 no.6:859-863 N-D '63. (MIRA 17:3)

1. Institut organicheskoy khimii AN SSSR im. N.D.Zelinskogo.

SHUYKIN, N.I.; MARYSHKINA, T.I.; RASHCHUPKINA, Z.A.

Conditions for suppression of the coke-forming process on a chromia-alumina-potassium catalyst in the dehydrocyclization of piperylene to cyclopentadiene. Kin. i kat. 5 no.5:950-952 S-O '64. (MIRA 17:12)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR.

NARYSHKINA, T.I.; BEL'SKIY, I.F.

Synthesis of cyclopentadiene homologs. Izv. AN SSSR. Ser. khim. no.3:570-571 '65. (MIRA 18:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

L 45684-66 EWT(m)/EWP(j)/T WE/RM
ACC NR: AP6020390 (A) SOURCE CODE: UR/0204/66/006/001/0022/0026

AUTHOR: Shuykin, N. I.; Naryshkina, T. I.; Rashchupkina, Z. A.

ORG: Institute of Organic Chemistry im. N. D. Zelinskiy, AN SSSR (Institut organicheskoy khimii AN SSSR)

TITLE: Dehydrogenation of decalin and tetralin in the presence of activated charcoals

SOURCE: Neftekhimiya, v. 6, no. 1, 1966, 22-26

TOPIC TAGS: decalin, tetralin, dehydrogenation, activated carbon

ABSTRACT: The dehydrogenation of decalin and tetralin was studied in the presence of two unlike activated charcoals having different ash contents and different specific surfaces. Activated birchwood charcoal and bone char containing 0.48 and 74.01% ash and having specific surfaces of 550 and 37 m^2/g respectively were found to be very active in the dehydrogenation of decalin and tetralin into naphthalene. The yield of the latter at 550-600° reaches 95-100%. When decalin is in contact with ash-free sugar charcoal, only 2% naphthalene is formed. The dehydrogenation of the condensed alicyclic hydrocarbons studied into naphthalene occurs with a high selectivity under the influence of activated birchwood charcoal and bone char, whereas in the presence of ash-free charcoal secondary reactions take place which lead to the formation of a small amount of C_6-C_8 aromatic hydrocarbons. The presence of tetralin in the tetralin dehydrogenation products and also the presence of dihydronaphthalene in the tetralin

Card 1/2 UDC: 547.659.1:542.941.8:661.183.2:66.094.187.3

L 45684-66

ACC NR: AP6020390

conversion products leads to the hypothesis that the dehydrogenation of alicyclic hydrocarbons occurs in gradual stepwise fashion. The porosity and specific surface were determined by A. L. Flyachko-Gurvich, to whom the authors express their appreciation. They also thank laboratory technician A. I. Paliy for carrying out the chromatographic analysis. Orig. art. has: 2 figures and 1 table.

SUB CODE: 07/ SUBM DATE: 10Mar65/ ORIG REF: 011/ OTH REF: 003

Card 2/2 YMT

NARYSHKIN, Ye. F

AUTHORS: Yatsimirskiy, K. B., Naryshkina

TITLE: The Kinetics of the Oxidation of Thiosulfate with Hydrogen Peroxide in the Presence of Tungstic Acid (Kinetika reaktsii okisleniya tiosul'fata perekis'yu vodoroda v prisutstvii vol'framovoy kisloty)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 2, pp. 346-351 (USSR)

ABSTRACT: The kinetics of the oxidation of thiosulfate with hydrogen peroxide in an acetic-acid solution in the presence of tungstic acid was investigated. The reaction velocity was performed by the phototurbidimetric method with a photocolorimeter ФЭК-М with a green filter. Between the concentration of sulfuric acid and the optical density of the solution a linear dependence was found to exist which may be expressed by the following formula: $D = \alpha [SO_4^{2}]$. In this formula D denotes the optical density and α the proportionality factor. From this equation follows that the modification of the optical density in the solution is proportional to the reaction velocity and can be used for the determination of the reaction velocity of the catalytic oxidation of thiosulfate. The authors investigated

Card 1/3

the dependence of the reaction velocity on the sodium--tungstate concentration in a quantity of $1,0.10^{-7}$ - $5,0.10^{-7}$ mol/l and on the concentration of H_2O_2 in a quantity of $0,8.10^{-3}$ - $7,2.10^{-3}$ mol/l as well as on the concentration of sodium thiosulfate in a quantity of $0,8.10^{-3}$ - $3,6.10^{-3}$ mol/l. The reaction velocity of the concentration of hydrogen ions was also investigated as well as the influence exerted by various additions. The reaction velocity of the catalytic oxidation of thiosulfate with H_2O_2 may generally be expressed by the following equation:

$$\frac{d\left[SO_4^{2-}\right]}{dt} = \kappa . C_W^q . C_{S_2O_3^{2-}}^m . C_{H_2O_2}^p$$

In this equation denotes κ the catalytic coefficient and q, m and p are the power exponents. The performed tests show that the reaction velocity shows a linear dependence on the sodium-tungstate concentration and the hydrogen-peroxide concentration. But the dependence on sodium thiosulfate is of a complicated nature. The reaction velocity of the catalytic oxidation of sodium thiosulfate with hydrogen peroxide increases with an increase in the concentration of hydrogen ions. In an acid medium tungstic

The Kinetics of the Oxidation of Thiosulfate With Hydrogen Peroxide in the Presence of Tungstic Acid 78-2-15/43

Acid is converted to various cationidic forms, e.g.: $H_2WO_4 + H^+ = WO_2.OH^+ + H_2O$, $H_2WO_4 + 2H^+ = WO_2^{2+} + 2\ H_2O$. The catalytic oxidation of sodium thiosulfate with H_2O_2 in an acid medium probably is a reaction between ions with opposite poles. At first the cationidic forms of tungstic acid react with hydrogen peroxide under complex-formation and then the slow reaction between this complex $[WO_2OHH_2O_2^+]$ and hydrothiosulfate $[HS_2O_3^-]$. There are 10 figures, 1 table and 10 references, 5 of which are Slavic.

ASSOCIATION: Ivanovo Chemical-technological Institute (Ivanovskiy khimiko-tekhnologicheski institut)

SUBMITTED: April 24, 1957

AVAILABLE: Library of Congress

Card 3/3

5(2) SOV/78-4-7-13/44

AUTHORS: Yatsimirskiy, K. B., Maryshkina, Ye. F.

TITLE: The Kinetics of the Oxidation Reaction of Thiosulphate by Hydrogen Peroxide in the Presence of Vanadate (Kinetika reaktsii okisleniya tiosul'fata perekis'yu vodoroda v prisutstvii vanadata)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 7, pp 1548-1551 (USSR)

ABSTRACT: The kinetics of the reaction mentioned in the title has already been quantitatively investigated, but in the presence of tungstate (Ref 2). The said reaction develops according to the equation $S_2O_3^{2-} + 4H_2O_2 = 2SO_4^{2-} + 2H_2^+ + 3H_2O$. The reaction rate was photometrically measured by the increase of the optical density of a suspension of barium sulfate. The results obtained are shown by the following diagrams: Figure 1. - Dependence of the reaction rate on the concentration of ammonium vanadate. Figure 2. - Dependence of the reaction rate on the concentration of hydrogen peroxide and thiosulfate. Figure 3. - Dependence of the reaction rate on hydrogen ion concentration. Figure 4. - Dependence of reaction rate on ionic strength (by the addition

Card 1/3

The Kinetics of the Oxidation Reaction of Thiosulphate by Hydrogen Peroxide in the Presence of Vanadate

of $NaClO_4$ or KNO_3). For the connection between the reaction rate and the concentration of the reacting substances the following equation is given:

$$\frac{d[SO_4^{2-}]}{dt} = K \cdot c_{NH_4VO_3} \cdot c_{H_2O_2} \cdot c_{S_2O_3^{2-}}, \text{ where } K = 3.8.10^7 \text{ mol/l.min.}$$

However, this equation holds only for a certain concentration interval. At very low concentrations of thiosulfate the dependence of the reaction rate on concentration is no longer linear. Table 1 mentions the influence exercised by various foreign ions upon the development of the reaction. By the formation of catalytically inactive complex compounds the reaction is interrupted by the addition of fluorides, citrates, tartrates, phosphates, etc. Univalent cations exercise no noticeable influence upon the development of the reaction. Copper- and ferrous ions accelerate the reaction by their catalytic effect. There are 5 figures, 1 table, and 5 ref-

SOV/78-4-7-13/44

The Kinetics of the Oxidation Reaction of Thiosulphate by Hydrogen Peroxide in the Presence of Vanadate

erences, 3 of which are Soviet.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut (Ivanovo Chemico-technological Institute); Stalingradskiy mekhanicheskiy institut (Stalingrad Institute for Mechanics)

SUBMITTED: April 7, 1958

Card 3/3

NARYSHKINA, Z. P.

Microbiol. Branch, Sci. Sanitation-Epidemiol. Lab., (1944-)

"Viability of dysenteric bacilli in the soil under experimental conditions,"

Zhur. Mikrobiol., Epidemiol., i Immunobiol., No. 6, 1944.